A COMPARATIVE STUDY OF WRITING ABILITIES IN TWO MODES AT THE GRADE 5, 8, AND 12 LEVELS

Principal Investigators
IAN PRINGLE
AVIVA FREEDMAN

This research project was funded under contract by the Ministry of Education, Ontario.
It reflects the views of the authors and not necessarily those of the Ministry.

Hon. Keith C. Norton, Q.C., Minister
George R. Podrebarac, Deputy Minister

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Ministry of Colleges and Universities

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Contents

	Page No.
Abstract	vi
Preface	1
1 The Design of the Study	4
2 Rhetorical Structure	12
Story Structure	12
Pedagogic Implications	25
The Arguments	26
3 The Transactional Writing: Its Subject Matter	37
4 Affective Development	47
The Affective Model: The Wilkinson Model	48
The Arguments: The Harrison Model	53
Analysis of the Stories	53
The Arguments	58
Pedagogic Implications	63
5 Syntactic Resources	64
6 Mechanics and Conventions	74
Types of Errors	75
Distribution of Errors	80
Proportional Frequency of Errors	82
Patterns of Errors	94
Discussion	101
7 Revision Analysis	103
Method of Analysis	103
Findings	104
Grade 8 Revision Analysis	109
8 Editing Strategies	116
Pedagogic Implications	121
9 Teaching Implications	122
Argumentative Discourse	124
Revision	126
Story Writing	126
Balancing Demands	127
References	128
Appendices	130
I Demographic Instrument	130
II Syntactic Scores for Syntactic Complexity Analysis	131
III Instrument for Error Analysis	132

LIST OF TABLES

		Page No.
1.1	Participating Students: N's	4
1.2	Description of Sample, by Grade and Mode	8
1.3	Length of Papers, by Grade and Mode	9
2.1	Story Structure	14
2.2	Percentage of Stories Containing at Least One Instance of Each Category or Subcategory	16
2.3	Number of Direct Consequences as Actions per Story	16
2.4	Percentage of Stories Satisfying Minimal Criteria for Completeness	17
2.5	Percentage of Stories Satisfying Criteria for Completeness	18
2.6	Percentage of Essays Approximating Conventional Argumentative Structure	26
2.7	Percentage of Essays Written in Response to Argumentative Stimulus Classified by Aim	32
2.8	Percentage of Essays Written in Response to Argumentative Stimulus Classified by Britton's Functions	33
3.1	Percentage of Total Essays Written in Each Category	37
3.2	Percentage of Arguments Dealing With Selected Broad Topics	38
3.3	War/Economy/Pollution Topics as Percentage of World-Based Topics	39
3.4	Number of Points per Essay	40
3.5	Degree of Elaboration	43
4.1	Wilkinson Affective Model	49
4.2	Harrison Affective Model	52
4.3	Percentage of Stories at Each Level of Affective "Self" Scale	53
4.4	Percentage of Stories at Each Level of Affective "Other People" Scale	53
4.5	Percentage of Stories at Each Level of Affective "Reader" Scale	54
4.6	Percentage of Stories at Each Level of Affective "Environment" Scale	54
4.7	Percentage of Stories at Each Level of Affective "Reality" Scale	55
4.8	Affective Development in Arguments	59
5.1	Mean Syntactic Complexity Scores at the Grade 5 Level and Comparative Data	69

Page No.

5.2 Mean Syntactic Complexity Scores at the Grade 8 Level and Comparative Data..... 70
5.3 Mean Syntactic Complexity Scores at the Grade 12 Level and Comparative Data..... 71
6.1 Percentage of Papers Containing Instances of Grouped Punctuation Errors, by Mode..... 81
6.2 Percentage of Papers Containing Instances of Grouped Spelling Errors, by Mode..... 82
6.3 Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 5..... 83
6.4 Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 8..... 84
6.5 Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 12G..... 85
6.6 Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 12A..... 86
6.7 Proportional Frequency per Sentence of Grouped Punctuation Errors, by Grade and Mode..... 87
6.8 Proportional Frequency per Word of Grouped Spelling Errors, by Grade and Mode..... 88
6.9 Proportional Frequency per Sentence of Pronoun Errors, by Grade and Mode..... 89
6.10 Proportional Frequency per T-unit of Errors Resulting from Distancing Problems, by Grade and Mode..... 90
6.11 Proportional Frequency per T-unit of Errors in Adverbial Usage, by Grade and Mode..... 91
6.12 Proportional Frequency per T-unit of Errors in Verb Usage, by Grade and Mode..... 92
6.13 Proportional Frequency per T-unit of Violated Shibboleths, by Grade and Mode..... 93
6.14 Patterns of Error Subsample: N's..... 94
6.15 Number of Papers in Each Error Pattern, by Grade and Mode..... 96
6.16 Proportion of Papers by Error Pattern in Each Grade (per cent)..... 97
7.1 Revisions: Percentage of Papers with No Instances of Each Category..... 105
7.2 Instances of Revisions per Paper, by Level..... 106
7.3 A Comparison of Means at the Grade 8 Level..... 111
8.1 Total Spelling Errors (Means)..... 118
8.2 Total Punctuation Errors (Means)..... 118
8.3 Mean Proportional Frequency of Spelling Errors per Word..... 118
8.4 Mean Proportional Frequency of Punctuation Errors per T-Unit..... 119
8.5 Editing for Spelling Errors (Means per Word)..... 119
8.6 Editing for Punctuation Errors (Means per T-Unit)..... 119

SAMPLE ESSAYS

		Page No.
1	Why Did I Stop? (Grade 12A)	20
2	Dreams (Grade 12A)	22
3	Keith (Grade 12A)	23
4	Wasted Food (Grade 12A)	28
5	[Canadian Armed Forces] (Grade 12A)	28
6	[Changes to the School System] (Grade 12A)	30
7	[People on the Streets] (Grade 8)	31
8	[Acid Rain] (Grade 8)	41
9	[Acid Rain] (Grade 8)	41
10	[Acid Rain] (Grade 12)	42
11	The Quarter-Round Finals (Grade 8)	44
12	A Plea for a Simpler World: Directed at the Four Billion Odd Inhabitants of the Planet Earth (Grade 12)	46
13	[A Narrative] (Grade 12)	57
14	Problems that are happening around me (Example of Expressive and Reflexive Stage)	60
15	This Composition is mainly for Game Hunters (Example of Identifying Stage)	61
16	[Physical Education] (Example of Organizing Stage)	62
17	[A Narrative] (Grade 5)	68
18	[Against Shipping Nuclear Fuel to Argentina] (Grade 5)	68
19	[Desiderata] (Grade 5)	68
20	[Russia and Nuclear Weapons] (Grade 5)	68
21	[Desiderata] (Grade 8)	99
22	[Problems in the School System] (Grade 8)	100
23	[Inflation] (Grade 8)	107
24	[Poor Countries] (Grade 8)	113
25	[Foreign Aid] (Grade 8)	114

INSTRUMENTATION

	Page No.
Prompts	5
Story Structure (Table 2.1)	14
Kinneavy's Taxonomy of Discourse	27
Wilkinson Affective Model (Table 4.1)	49
Harrison Affective Model (Table 4.2)	52
Scope and Nature of Revisions (Table 7.1)	105
Demographic Instrument (Appendix I)	130
Syntactic Scores for Syntactic Complexity Analysis (Appendix II)	131
Instrument for Error Analysis (Appendix III)	132

Abstract

In spring 1982 the entire population of Grades 5, 8, and 12 in two Ontario boards of education was asked to undertake a writing task. Half the population were assigned an argumentative task and the other half a narrative task. Of those writing narratives, half were asked to write a personal narrative and the other half an invented narrative. All the participating students were told in advance what their assignment was to be. On a subsequent day they were given class time to complete it, and then on a third day it was returned to them for revising. A 10 per cent sample was drawn randomly from the completed papers for analysis.

A subsample was analysed for its conformity to the norms of story structure and argumentation. The subject matter of the transactional writing was analysed. The level of affective development manifested in subsamples of both the stories and the arguments was rated. All the papers in the sample were analysed for syntactic complexity scores, and the computed scores were compared to the scores achieved by other populations of students at the same level. All the papers in the original sample were also analysed intensively for mechanical and conventional errors, and both raw and proportional scores were computed in order to assess the level of performance. For a subsample, a comparison was made of the kinds of differences apparent in the first and second versions of the papers, and the students' skill in revising and editing was assessed on this basis. On the basis of these analyses the researchers came to the following conclusions about the writing abilities of the students sampled:

1. The students' syntactic resources seem to be very high. There is no basis for any concern as to their tacit knowledge of English grammar.
2. The level of control of mechanics and conventions is also very high. There is no basis for claiming that the population represented by these students is lacking in basic mechanical skills.
3. Students showed considerable mastery of the conventions of story grammar as early as Grade 5 when the kind of narrative undertaken was an invented story. Even at the Grade 8 level, however, some students could still not impose the conventions of story structure on narratives based on their personal experience.
4. The narratives written by Grade 12 students were often masterly.
5. The students' invented narratives revealed a higher level of affective development there than in personal narratives. Their ability to present and explore the self in writing was fostered through their personal writing.
6. The analysis of the subject matter of the transactional writing showed that even at the Grade 5 level many students, if given the opportunity, can write with liveliness about political and moral issues not obviously related directly to their personal experience.

7. Even at the Grade 12 level a significant number of students were unable to write an argument that satisfied the minimal criteria for a successful argument.
8. Most students revealed little or no awareness of how to revise a paper. In addition, most of those who resorted merely to tidying up the mechanics showed that their strategies for doing so are not effective.

The researchers wish to particularly emphasize the following implications:

1. Since an increase in the level of difficulty of one aspect of a writing task may decrease the lack of control in another, teachers must take into account the nature of the difficulties in the tasks they set students (or students set themselves) and make their assessments accordingly.
2. Students at all levels should be given occasions to write narratives. In particular, this activity should be included during Grade 12, as well as at earlier levels.
3. Students need much more help with argumentation. In particular, they should read more and they should respond in writing to some of what they read in order to internalize more effectively the elements of the written model. This activity may be supplemented usefully by some analysis at more advanced levels, but analysis should never replace reading.
4. By the same means teachers should attempt to counter the pervasive model of persuasive discourse, which is the only model available to many students when they try to write argumentation.
5. Far too few students in the study revealed an adequate writing process. Teachers need to implement the kind of writing strategies recommended by such authorities as Donald Graves. However, such a change in teaching strategies needs extensive in-service training to be implemented effectively.
6. There is no evidence in the results to justify either more intensive teaching of mechanical skills or (insofar as the students' writing skills are concerned) the teaching of any formal grammar at all.

Preface

This study grew out of two earlier studies that were originally undertaken for the Carleton Board of Education. The first of these, known as "The Carleton Writing Project I" (Freedman and Pringle 1979), was undertaken in 1979. It involved a comparative analysis of the transactional and narrative writing of a selected sample of Grade 7 and 8 students. We had no involvement in the design of this study until the completed papers were given to us for rhetorical and linguistic analysis, but the results were so intriguing that we were grateful to have an opportunity subsequently to undertake a larger study for the same board. This study, known as "The Carleton Writing Project II" (Freedman and Pringle 1980), was undertaken in 1980. It involved an analysis of linguistic and cognitive aspects of the writing of a random sample of anglophone students throughout the whole board at the Grade 5, 8, and 12 levels, writing on a narrative assignment at the Grade 5 level and a transactional assignment at the Grade 8 and 12 levels. The specific purpose of this second study was to provide a basis for an evaluation of the core curriculum in Language Arts devised by the Carleton board, insofar as it dealt with writing ability. Like its predecessor, this report was prepared for a specific subcommittee of the board; neither report was intended for general circulation. Moreover, as research studies, both had certain problems that made it difficult to extrapolate from their results to any larger population.

The first report analysed writing of students whose teachers had volunteered to participate in a holistic scoring experiment. Consequently, it was not possible to extrapolate even to some larger population within the board on the basis of their results. Yet the results were fascinating. For example, in their narrative writing the 500 students in Grades 7 and 8 in the sample were performing at a level of syntactic complexity slightly above that of high-ability groups elsewhere in the status studies (which had attempted to establish norms for this measure on the basis of smaller samples). That result was intriguing enough. In the transactional writing, however, the same students seemed to be performing above the syntactic level of high-ability students at the Grade 12 level in the status studies. Moreover, in the narrative mode the students demonstrated an impressive mastery of the conventions of the genre assigned; in the transactional mode there was scarcely a hint of such rhetorical assurance. Finally, in the narrative mode the students showed nearly complete mastery of mechanics and the conventions of edited written usage; in the transactional mode their control of such conventions was much weaker: indeed, if we had not seen the narrative papers written by the same students, we might have concluded that many of them lacked basic writing skills. Obviously these results cried out for further investigation.

The second study was based on a strict random sample so that at least the results could be said to represent performance throughout the whole board with some reliability. In this study the Grade 5 students were assigned a narrative task, but the Grade 8 and 12 students an argumentative task. Again the results were intriguing. On the same measure of syntactic complexity as before, the Grade 5 students, reliably representing a population of some 2400 students, seemed to be doing about as well as high-ability groups elsewhere, but once again the Grade 8 and 12 students, each representing a still larger cohort, outperformed the students in the status studies to an unexpectedly high degree. On the other hand, the Grade 5 students for the most part wrote more than the Grade 8 students, and in many respects the mechanical skills of the Grade 5 students seemed to be superior to those of the Grade 8 students. It seemed likely that such differences did not result from the presence of an exceptionally strong (or weak) Grade 5 (or Grade 8) cohort in this board, but rather from the mode of writing assigned. In addition, there seemed to be some evidence that the Grade 5 students' performance was conditioned by whether they chose to write an imaginary narrative or one based on their own experience. Again, therefore, the study raised intriguing questions which, because of the design of the study, could not be answered.

Consequently we were delighted when the Ministry of Education asked us to undertake a third study, which would replicate some aspects of the two previous studies but would do so in such a way that the questions posed by them might be answered. The students whose writing was to be examined were to be drawn on a random basis from a broader population than that of the two previous studies, and students at all three levels were to be assigned one of three possible writing tasks: a transactional essay, an invented narrative, or a narrative based on personal experience. In this way we hoped to be able to determine what kind of writing one might expect from Ontario students in each of the modes at the three grade levels to be studied. Among the questions we hoped to investigate were the following: How does the syntactic complexity of Ontario students at these levels compare with that of students elsewhere as it has been described in status studies and experimental research? To what extent are such results affected by the mode of writing assigned? What kinds of syntactic resources do students draw on in order to achieve such results? How well do they control the mechanics and usage conventions of edited written discourse, and to what extent is such control affected by the mode of writing? If they are given the opportunity to revise a piece of writing, what kinds of changes do they make? Are they capable of carrying out extensive revisions that show that they know how to use the process of writing a composition to think through the implications of an earlier draft, or do they restrict themselves to superficial editorial changes? And if the latter is the case, do they at least show that they have efficient editorial techniques? If the piece of writing they produce is an argument, does it show the structural and rhetorical characteristics of argumentation? If it is a narrative, does it satisfy the expectations adult readers have of narratives?

This report is the result of that study. It should be stressed that its results are not valid for the whole population of Ontario's Grade 5, 8, and 12 students in 1982 in any technical sense, for the samples were in fact drawn only from two boards. But to a large extent the results are representative in the popular sense of the word. The areas served by the two boards range from exceptionally privileged and somewhat underprivileged metropolitan

suburban areas to small towns and cities with populations in the 4000 to 10 000 range, to small villages and rural areas, some of which are relatively prosperous and some of which are among the poorest in the whole province. Furthermore there is no reason to suppose that the range and calibre of teaching in the two boards are greatly different from the range and calibre in the province as a whole. Thus, although we will not make any technical claim that the writing we have studied represents any population other than the larger population from which our samples were drawn, we suspect that in many respects our samples are typical of the state of student writing in Ontario at the present time.

1 The Design of the Study

The papers that were the objects of this study were selected from essays written by students at the Grade 5, 8, and 12 levels in two Ontario school boards. The design of the study called for the whole Grade 5, 8, and 12 population in these two boards to participate in the study, with the exception of children in special education classes and children whose native language was not English and whose skill in English was not yet such that they could fairly be compared with native anglophone or native bilingual children. It proved to be the case that the number of children who responded was lower than expected; in one of the two participating boards the response rate for some classes only just exceeded 50 per cent. Unfortunately, owing to the way in which papers were collected in this board, we have no way of knowing why the response rate was that low, nor can we estimate what kinds of skewing factors may have operated as a result. Did some teachers, for example, instruct students whose writing abilities seemed to them weak not to participate? Or did the assignment happen to arrive at a time when illness severely affected attendance patterns in a majority of the schools?

Despite the peculiarities of the response rate, however, we have no hesitation in reporting the results of our analysis. As we have already stressed in the Preface, the results of this study could not in any circumstances have been technically representative of the writing abilities of Grade 5, 8, and 12 students in Ontario as a whole. The only technical claim we wish to make is that our results are based on a valid sample of the students who did participate in the study. The number of students who participated compared to the total population expected to participate is shown in table 1.1.

Table 1.1
Participating Students: N's

	Population			Response			% Response Rate		
	Board 1	Board 2	Total	Board 1	Board 2	Total	Board 1	Board 2	Total
Grade 5	2486	560	3046	1800	410	2210	72.4	73.2	72.6
Grade 8	2521	564	3085	1300	480	1780	51.6	85.1	57.7
Grade 12	3388	671	4059	1940	430	2370	57.3	64.4	58.4

On the basis of information supplied to us in advance by the participating school boards, a class of students at any level could be assigned one of three possible topics: a transactional topic, an invented narrative topic, or a personal narrative topic. The actual wording of the topics was as follows:

Transactional Topic

> There are probably things happening in the world around you -- at school, among your friends, at home, in the country, in the world -- that you think ought to be changed. Select one and write a composition (or an essay, or article, or letter) to convince someone else (preferably someone who has the power to make changes) that what you object to is really bad and ought to be changed.

Personal Narrative Topic

> Write a short story about something that happened to you personally or to someone you know. The story can be funny or sad, terrifying or puzzling: it's up to you. It doesn't have to be completely true, but you are to be one of the main characters.

Invented Narrative Topic

> Write a short narrative about some imaginary event. It can be funny or sad, puzzling, mysterious or terrifying -- use your imagination! -- but it must be a story you have invented. If you like, you might consider one of the following ideas, but you can write on any subject at all: An Unexpected Visitor, Never Again, A Lesson Learned, The Runaway, A Great Escape.

All teachers in the classes participating in the study received a package of instructions telling them which of the three topics was to be assigned to each of their classes. According to the design this should have generated an equal number of transactional and narrative assignments, with the narrative essays equally divided between personal and narrative topics.

There is of course an element of artificiality in all of these assignments. But there is an element of artificiality in much school writing, especially the writing that takes place in the context of English, and above all of "English composition". No doubt some adults undertake expressive writing for its own sake. The number who do so, however, must be very small. Still smaller is the number of those who undertake genuinely poetic writing. In most of the real-life writing that adults undertake, both the reader and the writer know that the primary function of the writing is to communicate information. For the writer, awareness of that purpose helps to shape the writing; for the reader, the same awareness ensures an active search for meaning -- a search in which such distractions as spelling errors may well be overlooked if the content is interesting.

In much of the school writing that takes place in the name of composition, however, there is no genuine communicative purpose to drive a writer to try to communicate a meaning. Rather, the situation requires the writer to put on a display -- a display that is partly or completely vacuous in a communicative sense. Moreover, the nature of our education system is such that many students undoubtedly assume, when they are asked to produce a composition for the sake of some test, that they are not entering on a communicative transaction with a reader willing to look for meaning; rather, they are exposing themselves to judges whose training has perhaps made them indifferent to any real meaning the student wants to communicate but who will be hypersensitive to other features of the writing, whose judgements appear to be (from the student's point of view) sometimes mysterious and unknowable, sometimes peripheral, but always vaguely threatening.

If for such reasons it is not clear that composition classes are the best places to learn writing skills that will serve students well in real-life writing later, for the same reasons it is difficult to avoid some whiff of artificiality in the composition topics we assign, whether our purpose is a daily composition exercise or (as ours was in this study) a large-scale evaluation. Obviously the topics we chose could not avoid this artificiality. But we tried to minimize its effects. We gave the students assigned the transactional topic the chance to select a topic of genuine concern to them, hoping that this would at least stimulate them to put on their best display. Similarly we gave half the students assigned a narrative topic the chance to write about something in their own experience, expecting that would generate some genuine commitment on their part, but also leaving the door open to a slightly more imaginative treatment than strict truthfulness would have imposed. The third topic, the invented narrative, could not have such advantages. But it is clearly the topic for which their previous literary experience best prepares student writers, and it is the kind of topic that invites the display of writing ability we hoped to elicit.

The assignment required three stages in the generation of the finished paper. On the first day teachers were to tell their students what their topic was and to let them know that on another day in the near future they were going to write an essay on it in class. To ensure that students would do their best we asked teachers to tell them that their papers would be marked and that the marks would count. On the other hand, we asked them not to discuss the topics in class at all: if some teachers did so, that would possibly put other students whose teachers did not do so at an unfair advantage. In addition, we were afraid that such prewriting orchestrated by teachers might limit some students to developing ideas expressed in class rather than working through ideas of their own. We wanted all students to be given an equal opportunity to do their own planning, using whatever strategies were available to them already.

A day or two after they had announced the assigned topic in class, teachers were asked to devote a whole class period to the writing of the first draft. A copy of the instructions had been provided for distribution to every student, and writing paper was available. Teachers were asked not to specify any length for the finished paper; if students asked how long it should be, we asked teachers to say that the essays should be as long as they needed to be in order to say what the students had to say. At the end of the period teachers collected these first drafts.

In the next possible class on a subsequent day, teachers returned the first drafts to the students and asked them to write a second version, using treated paper which was supplied. Teachers were asked not to comment on the first drafts or to help students with revisions; however, students were to be allowed to use dictionaries and any other aids that might normally be available to them as they prepared their final version. The teachers then removed the carbon copy produced by the treated paper for their own in-class purposes and, after removing any identifying marks, returned the top copy and the draft in envelopes to the board for our use. Each top copy had attached to it a short questionnaire which identified the date of birth, sex, and grade of the writer, as well as information about the number of years spent in French immersion classes.

In insisting that the assignments be completed in this way over three days we had several aims in mind. Above all, we wanted to avoid the total artificiality of the in-class test in composition, which can make the act of writing more vacuous than it is in any other circumstance. We wanted to give all the students some chance to think about their topic before they were required to write on it, so that those who had effective prewriting strategies could put them to work. And although we could not force students to treat their piece of writing as two tentative moves towards a more finished product in the way that real writers do, we did want to find out how many students are aware that writing may proceed through a series of steps and to give those who knew this a chance to take advantage of it. In short, we wanted to remove the artificial pressure that characterizes most in-class writing under examination conditions, and to give the students a chance to do themselves justice.

From the sets of papers completed in this way and passed on to us by the participating boards, we drew a strict 10 per cent random sample. The actual number of papers in our sample and its breakdown by topic is revealed in table 1.2. As the table shows, a number of students did not actually write on the topic assigned, choosing to write a personal or invented narrative topic instead of the expository topic assigned, or an exposition in place of the narrative topic assigned. We will comment briefly in chapter 2 on some of the ways in which these students reshaped the topic to suit themselves. For most purposes, however, we have restricted our analyses to the papers of the students in the sample who attempted the assigned topic.

Some indication of the range of writing we received as a result is presented in table 1.3, which shows the length in words and sentences of the essays we analysed, broken down by the grade of the students and the mode assigned. As the table shows, at all levels students wrote most in response to the invented narrative assignment and least in response to the transactional assignment. As the standard deviations cited suggest, in two cells the mean figures cited are not strongly representative of all the papers in the sample: both a Grade 5 student and a Grade 12G student who had been assigned an invented narrative topic wrote far more than any other student in the same cell, and in the case of the Grade 5 student, far more than one would have thought physically possible in the time supposed to have been allowed. If our computations in chapters 5 and 6 depended on the amount of writing produced by individual students, we would have been justified in excluding these two from the study. In fact, however, all the calculations we are to report were undertaken precisely to counteract the effects of mere length, and so these papers do not skew the results at all.

Table 1.2

Description of Sample, by Grade and Mode

	Written as Assigned			Not Written as Assigned					Assignment Unknown
	Trans	Narrative		Trans for Inv	Inv for Pers	Pers for Inv	Trans for Pers	Inv for Trans	
		Personal	Invented						
Grade 5	101	42	46	0	12	2	0	0	0
Grade 8	84	38	41	1	4	5	0	0	1
Grade 12G	31	17	12	1	4	2	1	0	1
Grade 12A	89	27	38	0	7	0	1	2	0

Key Trans: Transactional

Inv: Invented narrative

Pers: Personal narrative

Table 1.3

Length of Papers, by Grade and Mode

	Grade 5	Grade 8	Grade 12G	Grade 12A
Transactional				
Words				
Mean	126.20	228.00	265.00	398.35
S.D.	63.58	91.97	110.60	146.20
Shortest	38.00	68.00	92.00	124.00
Longest	442.00	565.00	624.00	874.00
Sentences				
Mean	9.46	14.98	14.48	22.14
S.D.	4.78	6.99	7.64	8.98
Shortest	1.00	4.00	5.00	5.00
Longest	28.00	37.00	44.00	46.00
Personal Narrative				
Words				
Mean	180.38	323.50	376.29	422.48
S.D.	74.81	104.58	113.26	183.60
Shortest	55.00	169.00	198.00	147.00
Longest	532.00	539.00	608.00	774.00
Sentences				
Mean	16.07	24.13	27.18	27.70
S.D.	7.35	9.34	8.54	11.46
Shortest	4.00	11.00	16.00	11.00
Longest	46.00	46.00	50.00	57.00
Invented Narrative				
Words				
Mean	234.28	327.24	471.67	519.05
S.D.	149.91	129.90	249.77	185.04
Shortest	62.00	91.00	239.00	96.00
Longest	1077.00	577.00	1214.00	886.00
Sentences				
Mean	21.24	25.17	34.50	36.50
S.D.	18.84	11.20	23.77	14.97
Shortest	5.00	6.00	19.00	6.00
Longest	134.00	59.00	107.00	65.00

We undertook a number of different kinds of analyses of some or all of the papers in this sample, stratifying the result according to the grade of the writers and the mode or topic of the assignment. To begin with, we wanted to determine in broad terms what the students conceived their task to be, insofar as their conception is suggested by the finished papers. Accordingly, we drew a subsample of the narrative essays and checked the extent to which the students at the three grade levels were able to realize at least the minimal characteristics of what adults expect to find in a narrative, and in particular the extent to which their ability to achieve this differed according to whether the task assigned to them was a personal or an invented narrative. This analysis is reported in chapter 2. Similarly, we undertook an analysis of certain cognitive and rhetorical dimensions of the transactional essays, starting from a 10 per cent subsample, but increasing the number by including further papers from the sample up to a maximum of twenty papers per cell (in a grade-by-board design). These analyses are also reported in chapter 2. Finally, since the latitude we had deliberately built into the transactional task enabled students to set themselves tasks of varying degrees of difficulty, depending on just how they chose to interpret the assignment, we undertook for the transactional essays an analysis of the kinds of tasks they had in fact set themselves as revealed in their essays. The results of this analysis are reported in chapter 3.

Such measures provide us with an account of the increasing success with which most students, as they mature, move towards and then achieve the norms of particular genres of writing as these are known to adults. However, the movement towards maturity cannot be defined only by those measures, for development in the areas they define is caught up in other less obvious, but ultimately more important, areas of development -- the development towards psychological, cognitive, affective, and moral maturity, all of which are also involved in the maturation of writing abilities. In order to examine development in this area, then, we drew a further subsample of papers and examined it in these terms, paying particular attention to affective development. The results of this examination make up chapter 4.

All those aspects of writing mentioned so far are dependent on another set of further skills, undoubtedly of a lower order, although prominent in popular awareness of what constitutes the ability to write: the linguistic skills that enable students to move from their overall notion of what constitutes a story or an argument, through the complexes of ideas they have to call on in order to bring that notion into existence, to the actual sequence of sentences that gives their ideas the form of a story or an argument. In order to gain some sense of the kinds of linguistic resources available to the students in our sample, we analysed every paper to determine the number of words and sentences written, the number of t-units (this measure is described more precisely in chapter 5), and the number of finite clauses. This analysis formed the basis for the computations of the comparative scores reported in chapter 5. The instrument on which the analyses were recorded is attached as appendix II. In addition, we undertook a much more detailed analysis of some aspects of the language from a subsample of the papers. The results of this analysis are also reported in chapter 5.

Next, since simple mechanical skills are also an important, though subsidiary, aspect of learning to write, we looked at this aspect of the papers. In every paper we identified every example of a large number of different types of mechanical and conventional errors. In the case of spelling errors and punctuation errors our count aimed at completeness. In the case of various other mechanical and conventional errors, our count was deliberately not complete. But it was extensive, and the results should give a fairly comprehensive picture of this aspect of the writing abilities of the students in the population represented by the sample. This count was used in the computation of the scores reported in chapter 6, and the instrument on which the scores were recorded is attached in appendix III.

Finally, for those students for whom we had (as we should have had for all students) both the preliminary and the final draft, we examined the first drafts in relation to the second in order to determine how many of the latter represented a complete new start, how many of them showed simple editorial changes to mechanics and conventions, and how many of them contained more extensive revisions. For the latter we classified the revisions according to the kind of change made and the level of discourse involved. The results of this analysis are reported in chapter 7. As for the purely editorial changes, we undertook a detailed comparison of a subsample, classifying the errors in the final papers according to whether they were copied from the first draft or introduced directly into the second draft, and counting as well how many errors were corrected as students copied the first draft. This analysis is reported in chapter 8.

On the basis of all these different analyses, we thought we could detect some fairly clear implications for the teaching of writing. These implications are drawn throughout the report, but in addition they are brought together in the concluding chapter.

2 Rhetorical Structure

A central question investigated in this study was the degree to which the essays written were successful in conforming to the norms of the mode or genre attempted. Did the stories conform to our culture's norms for story structure? Were the arguments well formed?

To answer these questions we developed separate sets of instruments for defining each mode.

STORY STRUCTURE

In order to develop an instrument to measure the degree to which the stories succeeded as stories, we turned to recent work in discourse analysis whose primary focus has been to discuss story comprehension and recall, and which has in the course of this analysis presented a series of different models defining story structure. Researchers such as Propp (1968), Rumelhart (1975), Meyer (1975), Thorndyke (1977), Kintsch (1977), and Stein and Glenn (1979) have developed a number of different models defining the basic units of a story and formulating the rules which describe their interrelationship. However, as Elsa Bartlett (1979) has pointed out:

> Although a number of different schemes for describing these have been proposed, there seems to be considerable agreement about the nature of the elements themselves. Thus, for example, stories can be broadly characterized in terms of two types of components: descriptive information about the characters and their environment and information about the narrative action. Narrative action can be further characterized in terms of events (or complications) and reactions (or resolutions).

Given the general fundamental agreement among the various models put forward, our criteria for choosing a specific model on which to base our instrument were these: first, that the instrument be easily applicable on a large scale by different raters; and second, that minimal criteria for success in realizing the schema be defined as part of the model. For these reasons we chose to base our own instrument on the model developed by Stein and Glenn, which is itself an elaboration of that put forward by David Rumelhart. Stein and Glenn first define the basic units of a story by classifying the basic categories of information that can recur; they further subdivide these categories into subunits; they then define the rules for their interrelationship.

Specifically, then, a story consists of a setting category and an episode system. The setting "introduces the main character(s) and describes the social, physical or temporal context in which the remainder of the story occurs" (Stein and Glenn 1979, 59). The episode system consists of one or more episodes or behavioural sequences related in certain specified ways. Each episode consists of an initiating event, a response to that event, and a consequent plan sequence which includes an internal plan, the application of that plan, and a resolution (that is, a direct consequence and a reaction). And each of these broad categories can be further subdivided in terms of kinds of information so that, for example, the initiating event can be either a natural occurrence, a human action, or an internal event (say, a decision or a feeling). See table 2.1 for a specification of the kinds of basic units and subunits possible within each episode.

Episodes vary, however, so that in many cases the internal response or the internal plan is not specified. However, for an episode to be considered complete it must contain at least some reference to:

> (1) the purpose of the behavioral sequence, (2) overt goal-directed behavior, and (3) the attainment or nonattainment of the character's goal. Therefore, an episode must contain (1) an initiating event or an internal response which causes a character to formulate a goal-directed behavioral sequence, (2) an action, which can either be an attempt or a consequence, and (3) a direct consequence marking the attainment or nonattainment of the goal. If these three criteria are not met, the behavioral sequence is defined as an incomplete episode (Stein and Glenn 1979, 72).

On the basis of the Stein and Glenn formulation, we defined our minimal criteria for success in incorporating story structure by specifying that each attempted story must contain (a) some setting information and (b) at least one complete episode as defined above. For our analysis we classified all the information in each story according to the categories and subcategories specified in table 2.1, defining at the same time the interrelationship between categories. We asked also of each episode whether it was complete or incomplete and tabulated the total number of complete and incomplete episodes per story. This instrument had been tested in two previous analyses of student writing, as well as in some pilot work investigating short stories written by professional writers (Freedman 1982; Freedman and Pringle forthcoming). These earlier studies showed that the instrument could be usefully applied to the writings of children and that our minimal criteria were satisfied by all the professional stories investigated.

Table 2.1
Story Structure

Episode One
Initiating Event Natural occurrence Action Internal event
Internal Response Affective Goal Cognition
Internal Plan Cognition Subgoal
Plan Application Attempt
Direct Consequence Natural occurrence Action End state
Reaction Affective Cognition State

To analyse the stories in the present study, twenty personal stories and twenty invented stories at each level (Grades 5, 8, 12G and 12A) were randomly selected, and two raters evaluated each, using our model. The percentage of stories containing at least one item in each category was calculated, as well as the average number of instances per story. Only those findings that revealed a consistent pattern will be described here. Table 2.2 reveals interesting developmental trends over the years. There are increases, clearly, over the years, in the percentage of stories containing internal responses to the initiating event (especially affective and cognitive responses), internal plans, and reactions to the whole episode (again specifically affective and cognitive).

Specifically, there is a steady increase over the years (from Grade 5 to Grade 8 to Grade 12) in the percentage of stories that have an internal response to the initiating event. For the specific subcategory of internal responses defined as affective, however, the dividing line seems to be between Grades 8 and 12, with the Grade 8s resembling the Grade 5s. Where the Grade 8s differ from the Grade 5s is in the percentage of stories with a cognitive response.

In the category of reactions to the episode as a whole, the dividing line is between the Grade 5s and 8s with the Grade 8s resembling the Grade 12s both in the category of reaction in general as well as in the specific subcategory of affective response. For the subcategory of cognitive reaction, however, this pattern is somewhat varied: while students in Grades 8 and 12G continue to cluster, those in 12A show a markedly higher percentage of stories with some cognitive reaction. And much the same pattern is in evidence in the use of internal plan: although the numbers are lower the variation is similar.

What all this means is best understood by looking at the categories that show development in the context of those where there is no such pattern apparent. The items that remain more or less stable are the presentation of setting, of initiating event (which is almost always an action), of plan attempts, and of direct consequences (again usually an action or actions). Where there is an increase over the years is in internal responses to initiating events, internal plans, and reactions to the episodes as a whole. The pattern that emerges, then, is one of a movement inward over the years, towards a far greater exploration of emotional responses and attempts to understand and control the actions of the external world. And this is consistent with our Wilkinson analysis (chapter 4) which shows the same increasing psychological depth and complexity as students mature.

Generally too, the presentation of affective responses seems to precede that of cognitive responses: the Grade 5s and 8s were similar in the percentage of affective responses to initiating events, while the Grade 8s exceeded the Grade 5s in presentation of cognitive responses. In the same way, although students in Grade 12A are similar to those in Grade 12G on most dimensions, where they differ is in the percentage of cognitive reactions displayed.

A second kind of developmental difference in the stories, which is immediately apparent on even a cursory reading and which is corroborated by this data, is the degree of elaboration. As the students mature the stories are richer in detail and specifics. More happens, and what happens is elaborated more fully. For example, as suggested above, the percentage of stories at all levels that include actions as direct consequences is constant. The difference lies in the number of such actions per story. See table 2.3.

Table 2.2

Percentage of Stories Containing at Least One Instance of Each Category or Subcategory*

Grade:	5	8	12G	12A
Internal Response:	32.5	54.0	84.5	83.0
Affective	26.0	27.5	73.0	83.0
Cognitive	11.5	23.5	45.6	44.0
Internal Plan	9.0	15.0	14.0	24.5
Reaction:	57.5	88.5	81.0	80.0
Affective	46.0	80.0	81.0	77.0
Cognitive	19.5	50.0	46.0	68.0

*These categories are, of course, not mutually exclusive, and so do not add up to 100 percent.

Table 2.3

Number of Direct Consequences as Actions per Story

Grade	Mode	Mean Number
5	Personal	0.70
	Invented	1.50
8	Personal	1.63
	Invented	2.67
12G	Personal	3.00
	Invented	3.90
12A	Personal	2.81
	Invented	3.94

To summarize, then, the stories increase in their degree of elaboration as well as in the richness of the inner life presented. And these results are consistent with our findings elsewhere using different instruments of analysis. (See, for example, chapter 4 on affective growth and chapter 5 on syntactic maturation.)

Beyond looking at the occurrence and recurrence of specific categories in the Stein and Glenn grammar, we also computed at each level the percentage of stories that satisfied the minimal criteria for a complete story as defined above. The following table summarizes these results.

Table 2.4
Percentage of Stories Satisfying
Minimal Criteria for Completeness

Grade	Personal	Invented
5	20	55
8	40	89
12G	92	90
12A	88	72

The first point to note is that for students in Grade 5 and 8, a significantly higher percentage of invented stories over personal stories satisfied the minimal criteria for story structure. This finding corroborates a hunch we had developed on the basis of a previous study where, although there was no assignment by the researchers to the two modes, it was apparent that some students were recording stories that had happened to them while others were creating imaginary tales. A comparison of the two groups showed that a far higher percentage of the invented stories were complete using our minimal criteria. Of course it was not possible to generalize on the basis of that data since, first, students had made their own choice as to genre and, second, the numbers were not comparable. However, the results of the current study, which was designed specifically to test this hypothesis, confirmed the previous findings: for the younger students (Grades 5 and 8), story structure is more frequently achieved with invented stories.

The reason seems evident. To write a true story that also conforms to the norms of story structure two sometimes conflicting claims must be negotiated: the demands of what actually happened and the expectations as to what happens in stories. Not everything that happens in life is material for stories. Stein and Glenn see overt goal-directed behaviour as central to a complete episode and define a specific structure that embodies such behaviour. Much that happens in the real world does not fit that structure and must be rejected in toto. More significantly, even when one's experiences do embody such goal-directed behaviour, it is still frequently necessary to ignore certain elements and heighten others in order to produce a shape that conforms to the "initiating event/plan attempt/resolution" schema.

Where the children were given free imaginative range in order to select material to create stories, they were far more succcessful in conforming to story structure, so that by Grade 8 nearly all the stories satisfy the minimal criteria. However, in the personal stories, where the demands of telling it as it happened were so insistent (despite our instructions, which allowed for some imaginative interjection), less than half the stories even at the Grade 8 level are successful.

There is an interesting sidelight to these results. Students at the Grade 5 level in the current study performed less well than the Grade 5 students in the original study which prompted this line of investigation. And since the original study involved a similar population (i.e., a 10 per cent sample of the students in the larger of the two boards represented in the current study), that result was suggestive. A comparison of that board's performance on the two studies is shown in table 2.5.

Table 2.5
Percentage of Stories Satisfying
Criteria for Completeness

Grade and Mode	1980 Study	Current Study
Grade 5 Personal	50%	20%
Grade 5 Invented	89%	55%

Just as we are not prepared to argue that there has been an improvement in teaching techniques in the secondary years to explain the differences in results for the argumentative writing (see below), so too we are not prepared to argue that there has been a deterioration in the teaching of story writing. What is more likely is that once again the assignment made the difference. In the earlier study, students were asked to "write a story about a terrible event or an event where something had gone wrong". In comparison with the prompts given in other studies (e.g., Bartlett 1979) this was very non-directive and general; however, in comparison with the current prompt, it offered far more of an organizing principle for the stories. Specifying a "terrible event" obviously suggested to more students the possibility of a goal-directed responsive sequence than the general instructions requiring them simply to "make up or tell a story". Many students at the Grade 5 level may not yet have a sufficiently distinct internalized sense of what "story" means that they can immediately draw on, although they can, in fact, write stories when given appropriate prompts. One thing that needs to be investigated is what kinds of prompts can best elicit complete stories at differing age levels.

To return to the data presented in table 2.4, an important point to note is that by Grade 8 nearly all the students are able to realize the basic structure of their genre in invented stories -- a feat they are far from accomplishing in their arguments, as we shall see. By Grade 12G they are able to achieve such structure, even in their personal stories. In other words, they have learned to balance the conflicting demands of experience and genre structure, to shape and select from life, to resist the demands of reality with the power of imagination.

The most unexpected finding, however, showed up in the Grade 12A results. While most of the students at that level were able to write stories that conformed to story structure when they were selecting from life's experience, only 72 per cent could do so with invented stories.

What happened? Careful scrutiny of the stories that did not satisfy the Stein and Glenn criteria (or that only satisfied these criteria when they were liberally interpreted) revealed two separate phenomena. The first is apparent when we examine the accompanying story "Why Did I Stop?" (Sample Essay 1). A preliminary use of the Stein and Glenn instrument suggests that this is not a complete story; there is no goal-oriented behaviour, which is the crux of the definition. What the writer has presented here, though, is a story that is about the very lack, or possible lack, of such purposive behaviour; the very point of the story lies in the questions it raises as to whether a certain sequence of behaviour was random or whether deeper, hidden goals by unseen players were involved. In other words, the story seems to turn on the expectation of goal-directed behaviour -- and its absence. Another story by a student in Grade 12A (not reproduced here) centres on goal-directed behaviour that was assumed to have taken place but that did not in fact transpire. In other words, both narratives imply a goal-directed behaviour pattern; that is, they take the conventional story schema and reverse it. They rely on the readers' having a set of expectations in their minds, and the point of the stories involves the reversal of these expectations.

In one sense, then, the writers are not satisfying the Stein and Glenn minimal criteria. In another, their stories presuppose such a structure and play on it, reversing their readers' expectations to make a more profound point. As opposed to, say, the Grade 5 stories which do not realize the norms of story structure, these narratives reveal authors with such a keen sense of the underlying schema that they can toy with it. Rather than signalling failure, these stories imply mastery.

A very different phenomenon, however, is apparent in a second set of Grade 12A invented stories that do not seem to satisfy the criteria for story structure. And the phenomenon revealed here is one that crops up again and again throughout the study. The Grade 12A students had interpreted the task at a higher level; they were telling, or making up, different kinds of stories. Rather than simply presenting a good story, they were attempting to illuminate life's mysteries, to define stances to life, to explore paradoxes.

Sample Essay 1 (Grade 12A)

Why Did I Stop?

As he was walking home later that night, his thoughts were strictly glued to the incident he witnessed early that day; that accident in which he very easily could have been part of. Was it fate, planned or sheer coincidence that made him stop and gaze through the stereo store's window at the corner. Had his eyes not glimpsed that incredibly stylish, modern stereo he may have kept walking. perhaps right in the path of the speeding, completely out of control car which, less than twenty feet away, caused three terrifying, bloody deaths. The three pedestrians who innocently fell prey to this horrid exhibition of witless, completely insane handling of something which was not meant to be a weapon, could have very well consisted of him.

The hundreds of seemingly blood-thirsty bystanders looked on with a wicked gleam, seeming to be enjoying this grotesque bloodbath as if the violence they see and hear through the media is not enough. Their eyes were gleaming acutely at the three hideous corpses, now barely recognizable as people leading carefree lives just minutes earlier. But Tim's thoughts were not of this absurd nature but were based on a less ignorant, more astonishing factor which ran rampid through his mind. Again and again -- What stopped me to look at that stereo," as if he foreshadowed what was going to happen. He was not really even interested in stereos, this was but the first time he had ever stopped for such reasons. Was it God, some other supreme being or what that stopped him from wandering into the path of that imbecile in his runaway death buggy. This is just one of the mysterious illusions which occurs at least once in everyone's life. "What would happen if you did this, if you didn't go there, if you missed that bus last week?" We will probably never know.

Their characters have rich inner lives, and the writer's point in telling the story is often precisely the depiction of this life. Consider the story "Dreams" (Sample Essay 2). A sequence of goal-oriented behaviour is implicit in this narrative (and consequently it was rated as a complete story), but the fact that the whole sequence was implicit rather than explicit is itself revealing. What interests the writer is the inner psychic growth of the main character, the narrator of the story.

Or consider the story "Keith" (Sample Essay 3). Its writer goes so far along the road of internal dramatization that no story in the conventional sense is realized. Instead what is presented is the tension between faith and doubt, between humankind's inveterate yearnings and implacable cynicism. Of course the portrayal of these opposing forces in the human psyche is not necessarily inconsistent with the story form; many classic narratives, in fact, embody just this dilemma. And this story gives evidence that its writer wished to do just that, to tell a story that would reveal this eternal human dilemma. The writer failed, not because he could not make up a story, but because he could not make up a story that also captured that inner truth.

In a sense, some of the Grade 12A students have the same difficulty accommodating the contrary pulls of reality and story form as the Grade 5 students; however, it is a different reality that they are attempting to accommodate. It is not just the reality of events as they occur sequentially in the observable world of phenomena. The reality they are trying to accommodate is an internal one, the inner drama of the soul caught in a tension between opposites.

Thus, where the Grade 12A invented stories do not realize the conventional schema, it is because their authors are either trying to embody a higher reality, a more complex vision, and are consequently having difficulty accommodating both this vision and the demands of story form; or because they are deliberately playing on the story form, upending it to make a more profound point.

Sample Essay 2 (Grade 12A)

Dreams

What are dreams? Dreams are often what everyone tries to experience in reality - dreams of success, love, victory and hope. Are dreams a necessary function of human life, or whould they be regarded as being totally abstract and uninvolved? This question has continually evaded me for years.

During thirty long and tedious years of my life, I have lived on these dreams, for life for me has been full of sadness, loneliness and despair. My seemingly dissillusioned dreams, however, are quite the opposite.

At only 5 years of age, already I had experienced more in my dreams than in reality. As shy and afraid of the world as I was, I was able to fantasize of unbelievable ventures, successes, and overcome great challenges without the slightest knowledge of what these issues in life are, or what they involve. I dreamed of being a great, over-powering leader of man without knowing how. I dreamed of being loved and cherished by numerous beautiful women without knowing that males and females are attracted to each other. I even dreamed of obtaining thousands and thousands of pieces of a special substance of which was unfamiliar and unexplanatory to me, but was a substance which, for some reason, gave me power and happiness which cannot be sought and gained without it.

10 years later, my dreams increased in complexity and demand. I dreamed of being king of the entire world. I had the power to make decisions for all people; power to order anybody to do which I wished without argument or revolt; power to demand unlimited beautiful women for my own pleasure; and power to overcome any challenge I desired or confronted.

Another 10 years later, my dreams lost even more reality, and was to me a hint of the future. The basic family structure had almost disappeared; independence was demanded at surprisingly early stages in life. Hard work was unnecessary to achieve success - luck was the basic factor. Hard work was unnecessary due to the simple fact that all work was done by machines; thus, accomplishment was also difficult to achieve.

Small miscellaneous factors included the loss of usual experimental dating due to advanced computer dating services; loss of travelling short and long distances due to instanteous travelling mechanisms; and loss of physical activity due to various machines taking place of regular chores. Such wonderful conveniences!

The next 5 years consisted of even more exaggerated dreams involving everything one could possibly hope for in life. Did my long span of imaginary dreams really contain the foundations for true happiness? My answer was an embarrassing and thankful NO. Where was the power to order

real friendship and love? Where was the great satisfaction of challenge and accomplishment? What is one's meaning in life without these factors?

30 years of my life had been wasted on totally artificial and meaningless dreams. Such dreams fail to identify real and true success, love, victory and hope. My life was full of sadness and loneliness only because I relied too heavily on dreams, and lost grips with reality.

From 30 years on, I gained the most hope I ever had, and fought for success, love, and accomplishment. I still have dreams though, but they are dreams which give hope for the future without the loss of the precious things we still have and should hold on to. Today, I am the President of the United States.

Sample Essay 3 (Grade 12A)

Keith

Alcohol has an amazing capacity for elevated, philosophical thought, as Keith well knew; then again, even lacking alcohol or any other drug, Keith found he always had nagging questions in the back of his mind which he simply could not dismiss.

"It wasn't so bad when I was younger and less educated, but the ideas and concepts I'm coming across now give me even more questions about the universe and the role that humanity plays in it. How can you say that we are simply in the control of a single entity or 'presence' as you put it?"

His friend and philosophical counterpart paused, and tried to form an idea that would be at least tangible for Keith. No matter what he did, he could never seem to take the doubt from Keith's eyes that God was, in fact, taking care of the human race.

"It isn't up to us to question how God can exist, all I know is that he does. -- I've felt it. If we concern ourselves with the system of the universe, the concept of infinite space, and all those other 'scientific' ideas of yours, we'll go crazy -- these things are, other than being ludicrous, too mind-boggling to contemplate.

A dissatisfied mumble and a motion towards the kitchen was Keith's response. As he fixed himself another drink, his mind was spinning -- the thoughts grew exponentially until he felt himself ready to cry. According to modern physics, he thought, he could walk through a cement wall and very few of his atoms would collide with those of the wall; the reason why it is impossible, he thinks, is that interatomic repulsions are too strong. According to his physics teacher, matter is simply concentrated energy -- energy with mass. If this was all so, then he was simply a walking force field, standing on a gigantic sperical force field, and surrounded by force fields that looked like trees and buildings and birds and bridges and cats. If he could convert his martini into pure energy, then he should have enough fuel for the rest of his life.

The more he thought, the more complicated things became. But underlying it all, he thought, there must be some central idea, some simple concept. It wasn't God, but something that did give order to the universe; it wasn't something that had to be feared, but it was something to be used; it didn't have a consciousness of its own, but it represented every atom in the universe. It was too big for just one man.

"Oh, to hell with it, I don't want to talk about it any more, let's go out somewhere. How late does pub night go?"

"Till two."

"Alright, let's head over there, maybe we'll see someone."

The questions are endless -- no one has, or even will answer them on Earth; the problem is that men's minds just won't let go of "reality."

How many times have men died before they knew the answer? How many men have asked the question? How many people have devoted their lives in a pitiful attempt to explain the unexplainable, answer the unanswerable? How many times has Keith died? How many times had Keith been born?

PEDAGOGIC IMPLICATIONS

The pedagogic implications of the analysis of the stories are not as obvious as those deriving from our analysis of argumentative structure (see within). By Grade 8 students are succeeding to a high degree in incorporating story structure. True, there is a lag in the treatment of personal stories, but by Grade 12 even the Grade 12G students can write true stories that conform to the norms of the genre. And it is not clear that there is anything that the Intermediate Division teachers can or should be doing to accelerate the progress.

It is important that teachers recognize that telling true stories is a more demanding task than making up imaginary ones. Teachers must recognize this fact when they evaluate papers, when they evaluate student progress, and especially when they interact with writers over their drafts.

That the task of writing a personal story is more difficult, however, should not prevent teachers from allowing students to take on such tasks. First, students do learn (and by themselves) to write personal stories that are good stories -- and probably, at least in part, from writing personal stories that are not good stories. Second, the value of such writing to the writer lies beyond the potential success in crafting an object, as chapter 4 suggests.

The results of this analysis, and especially the analysis of the Grade 12A essays, also confirms or illustrates the very complex reasons for seeming failures. When writers fail according to a criterion by which they had been seen to be successful before, it may be because they are attempting to move to higher levels or into other dimensions. Teachers must be aware of the totality of the process and its complexity, must recognize that stretching upwards may be initially graceless, may even cause one to lose one's footing, but that the attempt upwards must be encouraged despite all.

A different kind of message for teachers became apparent to us as a result both of administering the project and of evaluating its results. As part of our organization we met with teachers at all levels to explain their role in eliciting the assignments. A number of teachers at the Grade 12G and 12A levels were taken aback at the story assignment. They were sure that their students neither could nor would write narratives; it was not something they normally did at that level.

These teachers were finally prevailed upon to allow their students to participate. We have no way, of course, of tracing the students of these teachers, but the overall impression of the story writing at the Grade 12G and 12A levels gives the lie to their apprehensions. The general quality of the stories is very high; the stories are vivid, penetrating, rich in texture and imagination. Clearly it was a task that had engaged the students.

If in fact stories are not normally assigned at the Senior Division level, that is a mistake. Not only do the students write stories well and take pleasure in the writing, but clearly this genre offers an avenue for certain kinds of artistic, psychological, and philosophic probing not available in other modes or in other parts of the school curriculum.

THE ARGUMENTS

The prompt used to elicit transactional essays, it will be remembered, was as follows:

> There are probably things happening in the world around you -- at school, among your friends, at home, in the country, in the world -- that you think ought to be changed. Select one and write a composition (or an essay or article, or letter) to convince someone else (preferably someone who has the power to make changes) that what you object to is really bad and ought to be changed.

As the introductory paragraph of this chapter suggests, the above stimulus, which was assigned to 50 per cent of the students, was intended to elicit argumentative writing, what James Kinneavy (1971) calls writing "to prove a thesis". Argumentation in this sense is the mode that is most typically elicited in the academic environment (both within the composition classroom and outside), and the one that is specified and defined most elaborately in most conventional composition handbooks and rhetorics.

Broadly, such writing is organized around a clear thesis (either implicit or, more commonly, explicit) which is substantiated logically and through illustration in the body of the piece. Although the nature of the logic can be defined more precisely, as can many of the stylistic and organizational features, we chose to use as an initial instrument for describing the data the crudest and broadest description of argumentative structure. To satisfy our norms the piece needed only the following:

- a clear thesis (either explicit or implicit from the beginning);
- a substantiating set of logically developed points and/or illustrations attempting to prove this thesis and forming the body of the essay.

This crude and generous measure revealed the distribution by grade and level presented in table 2.6.

Table 2.6
Percentage of Essays Satisfying
Conventional Argumentative Structure

Grade	Percentage
Grade 5	28.5
Grade 8	40.0
Grade 12G	47.8
Grade 12A	65.4

There are three points to note in this data: (a) There is a clear development from Grade 5 to 8 and from Grade 8 to 12A. (b) The Grade 12G students are closer to the Grade 8s than they are to those in Grade 12A. (c) Even at the Grade 12A level, one-third of the pieces still do not approximate conventional argumentative form using our very generous measure.

To get at what was happening in those papers that were not conventional arguments (and to make certain distinctions within the category of successful papers), the essays were submitted to a second rhetorical analysis, using a more finely calibrated instrument developed on the basis of James Kinneavy's taxonomy of discourse (Kinneavy 1971).

There are six potential aims:

- to express oneself (focus on writer)
- to create a literary object (focus on text)
- to persuade an audience (focus on audience)
- to prove a thesis
- to inform (focus on subject matter)
- to explore

Using Kinneavy's descriptions of each of these categories as guides, all the transactional pieces were classified. For the most part they fell into the persuasive, proving a thesis, exploratory, and expressive. Sample Essays 4-7 illustrate typical features of these four types.

What distinguishes the persuasive writing is its hortatory tone (the reader is often specifically evoked and involved), as well as its emotion-laden language and style. Exclamations are frequent, as are value-laden terms and images that tug at one's heartstrings or arouse one's anger. There is considerable appeal through what Aristotle calls the "pathetic" argument -- based on our passions. There is limited appeal to reason, although an appearance of factuality and evidence is sometimes sought. (Advertising and political speeches are classic examples of the category.)

In contrast, in a piece designed to prove a thesis both the author and the audience are almost invisible. The focus is on the subject matter and the appeal is through carefully articulated and developed logical argumentation. Value-laden words -- indeed, strongly colourful language in general -- are avoided, while the case is made entirely on grounds of reason in as impersonal and objective a tone as possible.

As opposed to exploratory writing, writers of an argumentative piece begin with a clear indication of the point they intend to prove, and the whole text is a unified, well-organized piece arguing that specific point.

In exploratory writing writers are discovering their meaning. Various lines of thought are developed in order to be tested and then discarded or modified. The organization is that of a mind thinking. Consequently, the tone is more tentative and elliptical with many references to the self who is probing and exploring.

Sample Essay 4 (Persuasive Writing, Grade 12A)

Wasted Food

There are many things happening in this world today that I consider to be major problems. I would like to discuss one in particular, the waste of food.

Have you ever noticed, while eating lunch at school, at a restaurant or even in your own home how much food is being thrown out or given to the family pet. This is not necessary! This food can be kept for the next day or even put into other foods that you eat daily. People should realize that food is not going to go down in price, it is only going to rise. Learn to conserve food as well as electricity. Cook less food, and realize how much this food is costing you. Remember the children in the foreign countries who are starving and withering away to die. Think before you throw away that food, that you could be saving a life instead of killing one. Some people don't realize what they are doing so if we promote this issue more I think people would understand it in fuller terms.

I think that if people can throw away food that they have enough money to donate some of it to the organizations that help the needy.

Some of the places that you can donate your money to are CARE and UNICEF. These organizations are to provide the needy countries with food and medical care that will hopefully keep them alive. This will be a helpful hand. Conserve your food! Save it! Don't waste it! Put some of your extra money into these organizations and feel good about something that you have done for someonelse.

Sample Essay 5 (Proving A Thesis, Grade 12A)

In the past, Canadians have been proud of their armed forces. In past years, the Canadian soldiers have fought well in many battles such as Vimy Ridge in World War I and Dieppe in World War II. However, in recent years, the Canadian Armed Forces has been a neglected unit of our society. It has come to the point where our armed forces are in a desparate need for repair. It is imperative in today's world to have a well sought after army and it is therefore, very important that there should be a substantial increase in support, financial and moral, by the Canadian people and government, for the Canadian Armed Forces.

Canada's committment to NATO is the second lowest for all of the countries in NATO. Luxembourg is the only country which puts in less support than Canada; however, Luxembourg puts in a higher percentage of their GNP than Canada. There is also a very small number of Canadian soldiers in Europe. At any one time, there is no more than 5,000. It is essential that in a time of need, there be many more. Canada's role in NATO is to protect and to fight in Norway. However, the average Canadian soldier has never been to Norway because of lack of funds. There are exercises in Norway every year, but only once a year, again from lack of funds. If there was increased support for the Canadian Armed Forces, these problems could be overcome and improvements made.

The North American Air Defence (NORAD) is another of Canada's committments which is very lacking. In the 1960's, the Canadian government stopped the Avero Aero Aircraft project which was designed to improve our NORAD committment. The Avero Aero was a highly advanced aircraft for its time and would have still been compatable today. Today, the air elements of the Canadian Armed Forces rely on the Voodoo fighter which is twenty years old in design. It is also a very highly dangerous aircraft to fly. In recent years there have been several aircraft crashes involving the Voodoos. There was one at Uplands airport in Ottawa, in 1980, which claimed two lives. There was also another crash involving two Voodoos in New Brunswick in the spring of 1982. Luckily, all involved escaped alive. There are plans to buy the new CF-18 Hornet fighter from Macdonald Douglas; However, the rate at which they are being purchased is too slow. If there was increased support for the Canadian Armed Forces, these new aircraft could be purchased at a much faster rate, reducing the risks Canadian pilots have to take in the Voodoo aircraft. Also if these new projects started, like the Avero Aero project of the 60's, new industry in Canada would spring up, creating new jobs and reducing unemployment.

Today, the Canadian soldier is underpayed. He receives on the average $24.75 pay a day. A days work could be up to twenty four hours of work. The Canadian soldier also can have problems in even receiving his meger salary. Because of technical foul-ups, he can expect to wait up to nine months in order to receive his pay. If there was increased support for the Armed forces, this problem could be overcome. Also there could be substantial pay increases which would make the Forces look more attractive to the unemployed. The result could be fewer unemployed.

Today's Canadian Armed Forces, is a much needed, neglected organization in Canada. Increased support for the forces would much benefit our NATO and NORAD committments and it could create new industry and lower unemployment percentages for Canadians. If there is increased support for the forces, the moral of the Canadian soldiers and people would improve and Canadians can be proud of their committment in keeping peace in the world.

Sample Essay 6 (Exploratory Writing, Grade 12A)

There are many institutions in the country today that require change, not the least is the school system. Now being a student I must confess a certain bias, however it is the student who is probably the most qualified to suggest change, seeing how he is the one with firsthand experience.

The concept of school is sound. Any intelligent person realizes the importance of learning and it's benefit to both the individual and society. However being cooped up in a succession of frighteningly stark rooms for upwards of seven hours a day hardly seems to fit the bill. The purpose of education is not only to educate, but to hopefully inspire, challenge, and enrich the individual. The view from here as I listen to the daily moans and groans of fellow students indicates all too graphically that the school system at present is not fulfilling these objectives.

One critic of the school system has warned, "sitting in a classroom where you decide nothing, having your success or failure depend, a hundred times a day, on the plan, invention and whim of someone else, being put in a position where most of your real desires are not only ignored but actively penalized, undertaking nothing for its own sake but only for the illusory carrot of the future - maybe you can do it, and maybe you can't, but either way, it's probably done you some harm."[1]

As a student, this author has only too neatly summed up the prevailing frustrations that I and others around me have voiced at one time. Success or failure does apparently depend on the subjective views of those teaching us. The critic also points out that our real desires are actively thwarted. On a day when the sun is pouring through the windows and it is 70° outside, (20° C) I can only agree with him.

On reading this essay over, I'm struck by the cynicism of it. Given some thought, many of these frustrations and complaints are largely seasonal. Spring fever and the approaching summer holidays are too insistent to ignore. Yes, the school system needs improving, but changes and progress in education will only occur as a result of farsighted and progressive administrators in conjunction with pressure from the students. Hopefully the school system of ten years hence will be unrecognizable with that of today, and with any luck at all, it will be for the better.

[1]Postman and Weingarten, The School Book, (New York, 1972).

[Note: The concluding paragraph was not tacked on at the last moment. The whole was copied from the first draft.]

Sample Essay 7 (Expressive, Grade 8)

My topic is simply about "People on the Streets". If you ever walk downtown you usually see all these wierdos all over the place, either singing or playing a musical instrument just to bum money off of us! And a lot of tourists who visit Ottawa, don't want to walk around and see this! Especially a gang of boys and/or girls with music blaring. But speaking for me and many others we love "Rock" and don't mind the volume, but they shouldn't blast the music and disturb the peace.

Violence is another thing. I can remember once seeing a fight between two young men. What a sight! Everyone was crowded around watching. Of course one guy was winning and to prove it he was he kept beating the guys' head in and believe it or not, nobody stopped to help the man.

Many thousands of people get killed every year and most of them are killed in the city or on the streets. What can we do about this? We need help fast before we all go wierd!!

Expressive essays simply present the emotions and attitudes of the writer without any attempt either to justify them or to develop a train of reasoning concerning these views. Such essays involve the straightforward assertion of opinions; these opinions are not corroborated, explored, or developed -- simply baldly and emphatically stated.

Using these criteria, then, and the sample essays as models, the essays written in response to the argumentative stimulus fell into categories outlined in table 2.7. This table shows a number of trends. First, there is a gradual decrease in the percentage of essays that are expressive from Grades 5 to 8 to Grade 12G and then again to Grade 12A. Far fewer of the essays simply put forward their own emotional responses to and opinions about the topic without attempting either to argue these views or explore the ideas.

Table 2.7

Percentage of Essays Written in Response to Argumentative Stimulus Classified by Aim

Essay Type	Grade 5	Grade 8	Grade 12G	Grade 12A
Expressive	45	34.60	24.0	8
Persuasive	2	11.00	21.0	23
Exploratory	14	23.50	33.0	29
Proving a Thesis	3	11.00	15.4	22
Expressive/ Exploratory	14	13.50	2.0	1
Others	22	6.14	4.6	17
	100	100.00	100.0	100

On the other hand, there is an increase (although not at all levels a counterbalancing one) of essays written in the exploratory mode, where the emphasis is still on the writer but where the opinions are spun out, elaborated, tested, refined, modified.

It is possible to see these modes of writing as steps in a progression: from the initial exposition of one's immediate unreflective response to a topic (expressive) to a more critical and reflective examination and analysis (exploratory), sometimes culminating in a complex and comprehensive stance. If the writing does in fact eventuate in the writer's discovering a thesis in this way, the initial exploratory writing can be reordered and reshaped to create a piece that proves its thesis. In other words, these modes can be seen not only as different kinds of writing but also as different stages in the creation of a specific piece. Furthermore, the data suggest that (for these students in any event) these types reflect developmental differences as well.

In addition to the trends noted above, there is a steady increase over the years from Grade 5 to 8 to Grade 12A in the pieces that are either persuasive or intended to prove a thesis. Both these modes differ from the expressive and exploratory (a) in taking into account a reader's perspective and (b) in accommodating themselves to the formal constraints of specific genres.

This point can be seen more clearly if we collapse Kinneavy's classification into Britton's. (Kinneavy [1980] himself has argued for the possibility of such a synthesis.) Britton defines three primary functions of writing: the poetic (in which an object is created), the transactional (in which the writer attempts to act on the real world -- to inform, persuade, regulate), and the expressive (in which the writer's object is to express and thus objectify his or her own feelings, ideas, or attitudes).

Kinneavy's "expressive" and "exploratory" are both essentially expressive in Britton's sense: they involve language close to the self, accompanied by little attempt to accommodate either the needs of an audience or the forms of a genre. Both the persuasive essays and those proving a thesis fall into Britton's "transactional" category. Using Britton's categorization, then, the writing can be classified as in table 2.8.

Table 2.8
Percentage of Essays Written in Response to Argumentative Stimulus Classified by Britton's Functions

Essay Type	Grade 5	Grade 8	Grade 12G	Grade 12A
Expressive	72	70	59	38
Transactional	5	22	36	45
Other	23	8	5	17
	100	100	100	100

Increasingly, then, especially in the adolescent years, students are able to respond to a stimulus that asks that they move beyond the expressive, that they accommodate the demands and needs of an audience, and that the writing be reshaped to fit the norms of a genre. Such writing consequently involves an increasing ability to decentre as well as an ability to stand above one's ideas -- psychological as well as cognitive distance. (For further discussion of affective and psychological growth in writing, see chapter 4.)

One surprising result was the number of students who chose to write persuasive pieces. The stimulus was intended to elicit argumentative essays, writing that proves a thesis, because that genre is central in the academic community. The assignment, however, could be interpreted to require persuasive writing (because of the words "convince someone") and was so interpreted by a significant proportion of students.

That so many students in fact opted for this mode was unexpected, especially given the school setting. Nearly all content-area writing in schools or universities entails either the argumentative or the informative mode (to use Kinneavy's categorizations again); in other words, what is elicited is writing with an emphasis on subject matter, in as impersonal and objective a tone as possible, where the audience is presumed to be convinced by appeals to logic and reasoning only rather than by assaults on their emotions.

Nevertheless, a significant portion of the students chose the persuasive mode, although the models for such writing in the school setting are very limited. This result reveals how extensively such students are exposed to persuasive discourse, both oral and written, through the media outside the classroom. It also suggests that whatever exposure there is in the school setting to argumentative discourse (through direct teaching and models), it is not sufficient to counterbalance the influence of the persuasive model.

The final point to note about both the Britton and Kinneavy classifications is that although there is an important increase over the years, especially at the Grade 12A level, there is still, even at that point, an astonishingly low percentage of students who write essays that can be classified as proving a thesis (to use Kinneavy's definition) or, more broadly, transactional (in Britton's terms).

Why is this so? Why were so many of the students at all levels unable to realize the appropriate structure for argumentation in their writing (even using the crudest measures)? Why is so much of the writing exploratory or expressive?

A number of possible and interrelated answers suggest themselves. First, the students may simply not know what the appropriate structure of argumentation is. They may not yet have an internalized model or schema for argumentative discourse. In other words, they may not have read enough models of such prose to have intuited what the model should look like (what constitutes "enough" varying with the individual). If so, this would explain as well why more Grade 12s than Grade 8s and more Grade 8s than Grade 5s are successful; obviously, with increasing age, one is simply exposed to more.

The lack of exposure to relevant models would also explain why so many students wrote persuasive discourse rather than arguments designed to prove a thesis. Their exposure to persuasive discourse, in the form especially of advertisement and (to a lesser extent) political speeches is extensive. Consequently, when they are asked to convince someone, the model at hand seems immediately to be such emotion-laden non-rational discourse.

To teach argumentative discourse, then, teachers must not only teach the appropriate structure and expose students to appropriate models; they must also help students resist the pull of the somewhat similar, and far more familiar, model that is so pervasive.

An alternative explanation for the students' failure is not that they do not have the model internalized but rather that (for a variety of possible reasons) they do not know how to realize it.

One reason may relate to the cognitive demands of the task. That this element must play some part is borne out by an interesting piece of evidence. As already noted, one of the two boards involved in this study participated in a similar study several years ago. In that project all the Grade 8s and Grade 12s were asked to write a transactional piece designed to

elicit a piece of argumentation. The specific topic assigned read as follows: "Violence on television is a controversial topic with arguments on both sides. Give the basic position of each side before developing your own opinion." Writing on this topic, a significantly smaller percentage of the students was able to realize conventional argumentative structure when rated according to our same crude measure.

One could argue that the reason for this improvement lies in different teaching strategies instituted since the last study; however, there is no independent evidence attesting to such a change. A more convincing argument seems to be that the nature of the assignment made the task easier for the second group of writers. In the first study the students were asked to present both sides of the issue and to arrive at some thesis that could take both into account; in other words, to generalize about the pros, to generalize about the cons, and then to step above these generalizations cognitively in order to find a broader pattern, a superordinate generalization that could encompass both sides. For the current study, on the other hand, students were asked only to present one side of the issue. The higher cognitive step was not required, and, on the whole, more students were able to approximate the appropriate form in their writing. What this seems to suggest is that the degree of cognitive difficulty may have prevented some students from realizing that model of argumentative structure that they had already internalized.

A different or further explanation for the lack of success may lie in another direction. While it is useful to categorize much of the writing as expressive (in Britton's terms) or exploratory (in Kinneavy's), another way of looking at these pieces is to recognize that they are essentially first-draft writing. Kinneavy makes that very point when he explains that almost no published material is exploratory in aim; instead, such writing represents the writer's mind sorting through a problem, discovering the limitations of certain ideas, and probing tentatively towards alternate solutions. Typically, then, writers discover their ideas in such an exploratory manner and then revise radically, reshaping the material unearthed in their explorations in order to produce argumentative or informative or persuasive pieces, depending on the needs of the rhetorical situation. Britton too argues that expressive language is the matrix of all writing in the sense that, for each task, it precedes transactional or poetic writing at some level.

Most of the students in this study, however, never went beyond the exploratory or expressive stage. Although they were given enough distance from their first explorations, as well as a specified time to revise, most simply recopied their first drafts, making only minor changes. They did not reshape their explorations and expressive outpourings into transactional pieces.

In other words, these students do not seem to know how to revise or, more properly, how to compose, since, as Don Murray insists, "writing is rewriting". Their writing processes are radically truncated, and what they present as final copy is clearly only first draft. Chapter 7 analyses in detail what these students did and did not do when specifically allotted time for revision. What is important to note here is that, for a variety of interrelated reasons, most of the students in our sample, although clearly literate in other respects, were not able to write appropriate argumentative discourse.

3 The Transactional Writing: Its Subject Matter

The specific topic for the argumentative assignment was chosen very deliberately. Rather than *assigning* a common topic (e.g., abortion, the seal hunt, violence on television), we gave the students complete freedom of subject while attempting to legislate only uniformity in mode.

By allowing such freedom we hoped to ensure a kind of uniformity not normally sought in such assignments: equal (or near-equal) engagement with the topic. Common sense, as well as much contemporary writing theory (Young, Becker, and Pike 1970; Freedman 1982), argues that the quality of the product will depend at least in part on the importance of the subject to the writer. As psycholinguistic studies on talking have shown (Slobin and Welsh 1973), when children have something they want to say, they will find structures that had previously seemed unavailable to them to enable them to do so. Given the necessarily artificial constraints of school writing in general, we attempted to develop an assignment that involved something on which students had something to say. (And truly, despite the nonsense generally bandied about in defence of artificial assignments and conventional composition teaching, most "real writing" in the "real world" comes out of the authors having something they want and need to have said.)

Such an assignment, of course, also allowed us to make interesting comparisons between grades (and sexes) with respect to their specific choice of topic -- comparisons that reflect on the levels of development and on the educational environments.

The stimulus specified three possible loci for the selection of subject matter: home (at home, among your friends), school, and the world at large (in the country, in the world). Table 3.1 describes the distribution by locus of topic at each grade level.

Table 3.1
Percentage of Total Essays Written in Each Category

Locus of Topic	Grade 5	Grade 8	Grade 12
Home	15	4	0
School	15	14	16
World	70	82	84

first point to note about this table is the degree to which all students, even those in Grade 5, chose to write about world problems when given free choice. This evidence gives the lie to much conventional wisdom about the preferences and capacities of elementary school children, especially in the Junior grades. A common assumption is that what engages such children most is subject matter of immediate concern in their personal environment; rarely, in fact, are general or universal topics (or indeed argumentative writing at all) assigned them, except perhaps as research reports. That students selected such topics and wrote with considerable animation and passion should carry a pedagogic message for teachers and curriculum planners.

A second point of interest is that, while most students chose to write about problems in the world at large, there was a steady increase in such a selection by age, accompanied by a steady decrease in the selection of home as topic. Almost universally, at all grade levels, those selecting home as topic were extremely specific and personal, asking, for example, that their parents not get a divorce or that the family buy a new car. Consequently, the decrease in home-related papers reflects a decrease in writing focused very specifically on the self.

This is corroborated by a trend in the school-related essays. Although the percentage at each level of such essays remained constant, there was a striking development in their nature. While all the Grade 5s and nearly all the Grade 8s were extremely specific (complaining about their playgrounds or particular teachers), 7 per cent of the Grade 12s wrote essays concerning the educational system in general. (See, for example, Sample Essay 6). Thus, generally the topics of the essays become less personal and specific, dealing with larger, more universal, and more general issues.

Another trend was apparent in the essays dealing with world problems. At all levels there were three broad topics that accounted for a fairly large percentage of the papers: war (including nuclear war and the specific case of the moment, the Falklands), the economy (ranging from complaints about inflation and high taxes to the price of gas and stamps), and pollution. The percentage of students writing arguments at each grade level who selected such topics is summarized in table 3.2.

Table 3.2
Percentage of Arguments Dealing With
Selected Broad Topics

Topic	Grade 5	Grade 8	Grade 12
War	16	13	11
Economy	14	6	5
Pollution	8	11	5
Total	38	30	21

These topics represent the only major groupings that can be made of the world-related argumentative topics. Consequently, what this table suggests is not only that certain themes persist but also that they dominate the writing far more in the lower grades. If we calculate the number of war/economy/pollution essays as a percentage of the total number of essays written on world problems, the trend is more striking. (See table 3.3.)

Table 3.3

War/Economy/Pollution Topic as
Percentage of World-Based Topics

	Grade 5	Grade 8	Grade 12
War/Economy/Pollution	54.0	36.5	20.0

As students mature, the range of their topics increases. Grade 8 topics not represented in the Grade 5 papers include the treatment of the handicapped, starvation in the world, Bill 22, French-language issues, torture in the world, and lack of communication. The Grade 12 range includes discussions of doctors' strikes, computer technology (its strengths and limitations), Canada's dependence on the United States, regional divisions, the legalization of prostitution and marijuana, film censorship, Native rights, the tedium of a normal workweek, stress, and the decay of moral values in modern society. The topics are both more general and abstract (e.g., against unjust leaders, baseless opinions, peer pressure, the complexity of the modern world) and more specific although remote (e.g., Britain's economic problems, poverty in the Bronx district in New York). What we see is an increasing range of knowledge, an ability to empathize with situations that are remote in place and time (e.g., the plight of the Third World or the elderly), and the ability to generalize and to see the specific as an instance of the general.

The latter feature is particularly notable in those essays dealing with war. Half of the Grade 5 essays in this category focus exclusively on the Falklands dispute, as opposed to 25 per cent of the Grade 8 papers. By Grade 12, although the Falklands war is used as an instance of the larger issues, almost no papers deal exclusively with that dispute.

Furthermore, not only do the older students deal with more varied topics, but when they do deal with the same topic, the approach is on a different level. It is revealing to compare Sample Essays 8-10, two by Grade 8 students and one by a Grade 12 student. (Significantly, there were no Grade 5 papers on acid rain specifically, although a fair number dealt with pollution in general and referred to acid rain in passing. The Grade 5s dealt with pollution as a large, undifferentiated topic, lumping together all the manifestations, and homing in only on garbage and litter.)

What strikes a reader first is the difference in tone between the pieces: the Grade 12 piece has the dispassionate, impersonal, and objective tone of much scientific discourse, and of approved academic writing in general. Beyond this, however, there is a difference in the cognitive level of the pieces. The Grade 12 student, first, has much more specific concrete information, far more facts, at his disposal. What is more important, though, than the

mere amassing of such facts is that he is also able to classify, organize, and synthesize such facts, to generalize from them. He is able to chunk these chunks, to move to higher levels of generalization and abstraction. And such qualities not only lend substance and vigour to the argument, but they also allow for the better organization of the various points into argumentative form.

Equally striking is the ability of the Grade 12 student to stand above his knowledge, to see its limits and bounds ("The effects are not totally known", "as far as we know"). At the same time, the student is also able to relate this knowledge to other spheres of world knowledge, to see its implications and its interconnections with the patterns he has perceived in economics and politics. The Grade 12 student is better able to focus in and out, to differentiate precisely, and to explain in detail the exact nature of acid rain as well as to generalize to the world at large.

A contributing factor to these differences is, of course, schooling. Grade 8 and 12 students have learned about acid rain, if not in school then through reading scientific material. The Grade 12 students have simply learned more as a result of having had more such exposure and also of having more highly developed cognitive capacities.

Where the writers selected topics based more on everyday knowledge than on school learning (everyday rather than scientific concepts, to use Vygotsky's terms [1962]), the differences are less clear-cut. Students at the Grade 12 level, writing about the economy, for example, may have a wider lexicon and a more sophisticated syntax at their disposal, but their arguments tend to be as personal and limited in range, as undifferentiated and ill-organized, as those of the Grade 8s and even the Grade 5s.

Whether the topics involve scientific or everyday concepts, a major development is apparent in the texture of the writing, its richness of substantiation and detail. As reported in chapter 5, the essays become increasingly longer in terms of words, sentences, and t-units with age and level. The older, or more advanced, students are simply more fluent: they write more. The results of these word counts are paralleled by the result of a count of the number of separate points in each paper: the increase in verbal fluency corresponds to an increase in ideational fluency. (See table 3.4.)

Table 3.4
Number of Points per Essay

Grade	Mean	S.D.
5	4.292	4.002
8	7.500	4.460
12G	7.826	3.433
12A	10.103	5.640

Sample Essay 8 (Grade 8)

The one thing I think you should change in the world is Acid Rain. Acid Rain is a substance that comes down in the form of rain. Acid rain is made from pollution mixed in the rain. When the rain falls the acid falls also. It is estimated in less than 25 - 50 years from now our world will decay from this. When it falls on the lands, crops, forests, lakes and rivers, it makes them rot away. The acid eats away at them and in about 25 - 50 years they will be gone. You are probably are wondering what produces acid in the rain, well it is very simple. It is the strip mining, coal mining, smoke from large smoke stacks, from factories, planes, cars, boats, and worst of all garbage dumping. We are all saying how wonderful our world is, well if someone doesn't do something about acid rain, in about 25 - 50 years from now we won't be saying that.

Sample Essay 9 (Grade 8)

Acid Rain is wrecking our world and you the factory builder can stop it. I think you are handing us a line by saying "We are working on it." Don't just work on it, do something about it.

I don't like the way the Acid Rain effects our water, land and air. e.g. Water: The fish are sufficating by the lack of air the Acid allows through.

Acid Rain is made up of Sulfure oxide and other gases. The Sulfure oxide is invisable too the taked eye and takes a Infrared camra to see them. The particles and gases can travel for miles, day on end. The particles get caught in clouds and fall as Acid Rain.

The sulfure oxide particles can cause many diseases. Cancer, Heart diseases and Birth deffects are just some.

In time the Rain will affect all the Earth. For the safety of are kid I think we should stop it.

Sample Essay 10 (Grade 12)

What effects does "Acid Rain" have on the environment? Does it affect man? These are two questions which will here after be dealt with. First of all what is Acid Rain? Acid Rain is termed as being any precipitate which has a ph level below

The effects of Acid Rain on the environment are not totally known. But much knowledge has been gathered on the subject. The most widely known effect of acid rain is that it kills fish. This, however, is only partially true. The acid rain itself does not kill the fish. It is, however, the acid rain which makes the water more acidic which kills the fish. When the water becomes acid, it kills the photo-plankton in the water which is responsible for producing oxygen. With a lack of oxygen in the water the fish suffocate and so another effect of acid rain on the environment is that it causes lakes to become dead. After a few year (10 - 24 depending on the acidity of the rainfall) a lake becomes void of life. It is therefore said to be a dead lake. Dead lakes appear to have crystal clear water with a blue tinge. In Ontario there are about 400 dead lakes and 4,000 which are dying.

The effects of Acid Rain on man are even less known than that of these on the environment. The fact remains, however, if it is not good for the environment, it must not be good for us. Acid Rain affects man indirectly more than directly as far as we know. Acid rain stunts the growth of timber which we use in construction and manufacturing. Thus we get poorer quality products which affect our economy. Also it inhibits the growth of crops. Without healthy crops we will have less food for the world's population. Lastly and most important acid rain causes plants to die. Plants give off oxygen which we need to survive.

For these reasons and many others acid rain should be stopped or at least controlled. Not knowing its full effects on man and his environment is something which should make people think.

A number of things are interesting about this data: first, the tremendous variability of the Grade 5s, with a standard deviation approaching the mean; second, the striking increase in the number of points from Grade 5 to Grade 8 to Grade 12A; and finally, the similarity between the Grade 12G and Grade 8 essays.

Another interesting kind of development takes place in the degree of elaboration of each point. See table 3.5.

Table 3.5
Degree of Elaboration

Grade	Mean Number of Words Per Point
5	30.0
8	30.0
12G	30.5
12A	39.0

What is striking here is the similarity between the Grade 5, 8, and 12G essays. The growth from Grade 5 to 8 to Grade 12G lies in the number of separate points raised but not in the degree of elaboration per point. In contrast, there is a marked increase in the degree to which the Grade 12A students elaborate their points. The increase to Grade 12A, then, is marked by a double development: an increase in the number of points and an increase in the degree to which each point is elaborated.

To sum up, then, the topics of the arguments become increasingly more varied as the students mature, tending both to the more abstract and general as well as to areas more remote from the immediate personal concerns of the students. Where students at different levels choose the same topics, at their best the Grade 12 students are able to produce far richer, more vigorous, more cogent, and more sophisticated arguments. At the minimum, the writers are considerably more fluent, producing more ideas and elaborating each of these ideas in greater detail.

In addition to these differences between grades, there is a very important distinction within each grade and common to all levels. Speaking loosely, this is the difference between those who chose manageable topics and those who chose difficult topics. Some students opted for very specific and concrete topics -- ones that could be focused so narrowly that in two or three pages the topic could be dealt with in appropriate depth and with sufficient illustration. Probably the best-argued piece of writing in Grade 8 is one that argues for changing the number of games in the quarter-round finals from five to seven (Sample Essay 11).

Sample Essay 11 (Grade 8)

The Quarter-Round Finals

The first round of the playoffs should be the best of seven series instead of the best of five. The reason is a bad team, playing a really good team, might get a couple of lucky fluke breaks and end up beating the good team. An example of this is the Quebec Nordiques and Montreal Canadiens series. Quebec finished fourth in their division with 82 points while Montreal finished first with 109 points. Quebec ended up beating Montreal in the series. It went to the fifth game and went into overtime. 22 seconds into the overtime a Quebec player brought it from beside the net and put it in. It was a hard decision for the referee to make but at about ten seconds later he called it a goal.

Another example is the Los Angeles Kings and the Edmonton Oilers. The Kings finished fourth in their division with only 63 points. Edmonton finished first with 111 points but the Kings got lucky breaks and beat the Oilers out of the series. Had this series have been the best of seven the Oilers would have had time to get their act together.

Another reason the series should be the best of seven is there would be more money for the league and the owners. Take the Edmonton Oilers who average a crowd of about 17,000 people each night. If the series had of been the best of seven series they would have got four games in their arena so they would get a total attendance of 68,000 people. At 10 dollars a ticket they would have made $680,000 dollars. This is just for one team but just think if you had of done this for all 16 teams that made the playoffs.

There would be more of a rivalry between two teams if they played a longer series. Take the Quebec and Montreal series. There was such a rivalry between these two teams because they were in the same province and were pretty close together. In this series these two teams fought, hit, and skated hard just because they wanted to beat each other. Here are some quotes from the Ottawa Citizen to prove my paragraph above. "Habs reduce battle of Quebec to mere skirmish". "Canadians may have tiger by the tail in Nordiques".

Steve Shutt, a member of the Montreal Canadians said "The best of five series is unfair because the weaker team could rest there better player at the end of the regular season because they had nothing to lose going into the playoffs".

There might even be a lose of interest. Here is another quote from the Ottawa Citizen. "With Edmonton and Montreal eliminated from Stanley Cup play, surely we can assume that interest in Canada has been pared by 75 per cent.

With all of this information I think this proves the best of five series is unfair.

This piece is well organized, fully substantiated, convincing, and effective. The point is that its author has selected for himself a very different task from that chosen, for example, by a very fluent and cognitively sophisticated Grade 12 student who is arguing for a simplification of life (Sample Essay 12).

On the one hand, the author of Sample Essay 11 has been able to select effectively to meet the constraints of his time, space, and especially level of maturation. The writer of Sample Essay 12, in contrast, has selected poorly, attempting a subject that requires far more time and space, and probably a greater degree of experience and cognitive maturation. Nevertheless, the Grade 12 paper represents a stretching upward; the writer is struggling to articulate his as yet dimly understood, but clearly powerfully felt, response to life. In choosing the subject, the author has made a mistake -- a miscalculation. It is a mistake, however, that he ought not to be penalized for. Any educational system that aims to facilitate growth (cognitive, affective, psychic) in its students must learn to reward both kinds of writing, while recognizing their differences.

Safe and formulaic writing falls into neat patterns far more easily than writing in which we are grappling with new material, struggling to express new ideas. It is to no one's advantage to prefer safe writing. Sometimes, as chapter 7 suggests, writing such as that of Sample Essay 12 can be brought through a series of successive drafts to approximate argumentative form more closely. There may, however, be scripts where the ideas have not yet become integrated sufficiently in the writer's mind, even after the exploratory writing, for a neat and perfect structure to emerge. A good writing teacher recognizes and applauds such pieces for what they are -- attempts to push beyond the formulaic, to reintegrate one's work at a higher level.

Sample Essay 12 (Grade 12)

A Plea for a Simpler World: Directed at the Four Billion Odd Inhabitants of the Planet Earth

All I ask for is a society where honesty doesn't lead to more complication than dishonesty. Where equity is our mythos and corruption our insanity. Perhaps if we paused momentarily from the conditioning of a small child and took this opportunity to learn and be influenced by it's innocence, the educational process would be complete. For true education can exist only when experience is exchanged or share, not sent in one direction to be later forgotten. It is a poor teacher or professor who will not allow him or herself to learn from his or her students. More can be learned from youth than is normally realized. The most sensitive and intelligent people in our world have the ability to be child-like, to a controlled degree. However, the extent of this control must be determined by the individual, not the society as a whole.

An important point to be made is that by this plea, I am not asking to "go back to a simpler time", but rather to change the norm for the first time in history. Contrary to what people normally believe, the world has become no worse than it ever has been. Unhappiness and unfairness, war and corruption have been around as long as mankind has lived on this planet, and always will be. Perhaps if we took the advice in this plea, however, we could improve the world by first improving human nature or the individual.

Therefore, all I ask is that we consider this, and perhaps, someday, these problems that plague mankind will be obliterated.

4 Affective Development

Even the most casual reading of the collected papers reveals the enormous growth that takes place between Grades 5 and 8 and then again between Grades 8 and 12. The various analyses of genre structure discussed in chapters 2 and 3, like the syntactic measures discussed in chapter 5, give indices of this growth. Such instruments, however, do not sufficiently account for the obvious quality of greater maturity that any reader will perceive in the writing of older students.

Until recently, the only tools available to researchers in assessing growth or evaluating writing were error counts, syntactic counts, and stylistic analyses. None of these gets at the clearly evident quality referred to above. Holistic scoring, which has recently come into vogue, may capture some of this quality to a limited extent, but because of its deliberate and necessary vagueness, its reliance on a holistic and undifferentiated response, it does not allow one to define what one has seen and responded to.

For this reason, researchers had been fairly hamstrung, and analyses of writing consequently have seemed limited and often beside the point in their discussions of growth in writing. In the past ten years or so, however, very important work has been done, especially in England, in assessing growth in writing, and one of the most fruitful aspects of this work has been its development of a far more illuminating set of instruments. First James Britton and his team, in the research project described in The Development of Writing Abilities 11-18 (London: Macmillan, 1976), and then Andrew Wilkinson and others working on the Crediton Project (see Wilkinson et al. 1980, 1983), formulated and tested a number of measures intended to define those until-then undescribed features of writing and the writer. Britton and Wilkinson see composing as a complex activity, drawing on the writer's psychic, cognitive, affective, and moral energies. Consequently, an individual's growth along any of these dimensions is manifested in their writing. And the Britton and Wilkinson developmental their models are attempts to articulate stages of growth along such dimensions, based on analyses of written texts.

For this study we did considerable preliminary work, testing several of the Britton and Wilkinson models. For our purposes, and with our data, the following models proved most fruitful: for the narratives, Wilkinson's affective scale (Wilkinson et al. 1980) and for the arguments, a version of B.T. Harrison's affective model, which is an earlier scheme on which the Wilkinson model was based (Harrison 1979).

THE AFFECTIVE MODEL: THE WILKINSON MODEL

Wilkinson uses the term affective to "describe the emotional, interpersonal, and imaginative aspects of man's nature" (1980, p. 52). His affective instrument, then, is intended to describe growth in these areas. It is important to note, as Wilkinson himself does, that his model of affective growth (as opposed, say, to those describing cognitive or moral growth) is at least partly culture-based. "It is not possible to take a normative view of emotional maturity -- to say that all mature individuals must exhibit certain characteristics. This will be related to the value system of the particular society, as well as varying with individuals. Where self-control is regarded as virtue, self-expression might be regarded with suspicion. The Southern Italian is able to express aggression verbally; he might be thought of as immature by the laconic self-contained Scot, whom in turn he might think of as underdeveloped" (p. 52).

With this possible limitation in mind, Wilkinson goes on to develop a model of affective growth. He defines three categories, with two subcategories in two of them, where affective development manifests itself. The first is "Self", and in the writing one sees the following pattern: Self first "expresses emotions, becomes aware of these emotions; evaluates them, recognizes their springs and complexities: becomes more able to tolerate conflicting emotions, becomes aware of motives behind apparent motives. Self becomes aware of self-image and possible image in the eyes of others" (p. 68).

The second category is "Others", with two subcategories: other people who appear in the writing and the reader. In the depiction of other people, there is a development from the early years where no others appear to the late period where others are fleshed out elaborately and empathetically. The movement then is from egocentricity towards greater decentredness. In the same way, young writers are egocentric with respect to the reader, unable to leap imaginatively into another's mind to recognize the limits of their knowledge.

The third category or locus where affective development manifests itself is in the treatment of "reality", which is subdivided into environment and reality (or the human condition). As to environment, the movement is from a seeming unawareness of the physical world to a far more detailed and sometimes metaphoric use of the surrounding world. The subcategory "reality" reveals the way in which the writer perceives fact and fiction. The movement is from an initial belief that fiction is fact (the events actually happened), to an awareness of their separateness, and finally to a recognition that fiction can symbolize certain kinds of non-literal human facts. Table 4.1 reproduces the Wilkinson model in detail.

A subsample of the stories (twenty personal and twenty imaginative at each level) was analysed according to the Wilkinson affective scheme.

Table 4.1 Wilkinson Affective Model

1 **Self**

The writer expresses his emotion and his awareness of the nature of his own feelings, or implies his emotion by describing action from which the reader can infer that the writer was in the grip of an emotion.

1.1 - expresses or implies his own emotion, mechanically in some written work, explicitly in others, e.g. "My feet were as wet as anything", "I am afraid that day is a long, long, way away."

1.2 - not only expresses but evaluates emotion, e.g. "The saddest day of my life", "I did not like it indeed."

1.3 - shows awareness of self image, of how he appears or might appear, e.g. "I look like a fool."

1.4 - shows awareness of the springs and complexities of emotion, e.g. "I got rather nervous about it and I couldn't find the way and went into another room and looked like a fool standing there asking where room one was."

1.5 - shows a general attitude or disposition, e.g. "I long for the day when I can think about him without it hurting too much."

2 Other people

The writer shows an awareness of others both in relation to himself and as distinct identities.

2.1 - records the mere existence of other people as having been present. This is the single dimension: others are present - acting, speaking - but no emotion is apparent by inference, e.g. "The two boys went for a walk with their mother and they got lost and they came to a fence and that fence was electric and they was not lost..."

2.2 - begins to indicate the separateness of others by, e.g. giving their actual words or significant actions. "I woke up, had my breakfast" is probably not significant; "the old man smiled" may well be.

2.3 - the thoughts and feelings of others by quotation of actual words, perhaps as a dialogue, or by description of them, or actions indicating them. More

perception called for than in the previous category though it might be fairly conventional.

2.4 Analytical, interpretative comments on aspects of character and behaviour, or insightful quotation or dialogue.

2.5 Consistently realized presentation of another person by a variety of means, perhaps by assuming persona.

2.6 Ability to see a person and his interactions in extended context (e.g. a character in a novel).

3 Reader

It is often argued that writing to an unknown or not well-envisaged reader will be poorer in quality since it lacks focus. Certainly the imaginative leap of the writer into the minds of others so as to grasp what terms have meaning for them must characterize effective communication.

3.1 .. reader not catered for. Writing context-bound, incomplete information, links missing.

3.2 - the reader is a person or type of person to the writer. He may not be conscious of this, but rather attempts to fulfil expectations within the situation. He may do so partially but imperfectly.

3.3 - the writer caters specifically for the reader, e.g. by relevant information, explanation (sometimes asides), shows an empathy with him, telling him what he needs to know to be able to interpret what he is told.

4 Environment

The writer shows an awareness of physical or social surroundings, a sense of time and place. On the one hand the environment may be a source of special stimulus. On the other hand a "restricted code" may not offer the necessary context. Getting the register right is a sign of awareness of social environment.

4.1 - assumes the environment.

4.2 - describes or explains the environment, barely adequately giving background details, or gives enough details to clarify the background.

Table 4.1 Wilkinson Affective Model (Cont'd)

4.3 - responds to the environment in a way that shows it has been especially significant and stimulating.

4.4 - chooses environmental items to achieve an effect, thus showing a higher degree of selectivity and evaluation than that suggested by 4.3

5 Reality

This is concerned with how far a writer recognizes a distinction between the world of phenomena, and the world of imagination, between magical and logical thinking; with how far the writer's own preferences or beliefs can come to an accommodation with external reality; with how far the literal-metaphorical aspects of experience can be perceived in complexity.

5.1 Confusion of the subjective and objective world. This seems to occur with young children who believe that stories are 'true'.

5.2 - gives a literal account without evaluation.

5.3 - interprets reality in terms of fantasy.

5.4 - interprets reality literally but in terms of logical possibilities.

5.5 - interprets reality imaginatively in terms of art, perhaps symbolically or metaphorically.

(Wilkinson et al. 1980, 228-230)

Table 4.2 Harrison Affective Model

i. Expressive stage. What do I sense, feel, do, experience, in this world?

In summary, the first, expressive stage is: directly responsive to the senses, naively communicative and eidetically expressive, context bound. Simple, immediate and unsifted recall of experience; strongly autobiographical basis to writing. Enthusiastic for simple events and sensations of a story in writing and reading.

ii. Reflexive stage. What effects do these experiences have on me? In summary, the second, reflexive stage is: reflective, growing aware of own feelings, relating outside to self, exploring 'inwards'. Tending to exploit relationships, reading for own purpose in working out personal bearings.

iii. Identifying stage. How do I identify with the people and things related to me?

In summary, the third, identifying stage is, growing aware of the 'thatness' of the outside world, growing in empathy, aware of feelings and identity of the other. Capable of some sustained and detached attention to own emotional involvement. A weighing towards 'cognitive' or towards 'affective' aspects may be noted, but a blend of these is assumed in the act of identifying. Learning practical skills in relating to people and problems. Tending most to value the person/problem/story for him/her/itself, valuing distinction and difference.

iv. Organizing stage. What values and aims and concerns do I hold on behalf of my world?

Growing sense of commitment on behalf of others, of the group, community, world; growth of sense of belonging, critical, supportive of, contribute to communal values. Comparative skills develop. Tending to synthesize, response to people with response to wide social and moral concerns.

v. Integrating stage. What values emerge from all my relationships, on what do I claim to found my beliefs?

Having established a secure sense of self-hood the learner moves toward a disinterested and independent speculation and exploration, towards a sense of meaning, a 'world view', blossoming of spiritual/religious life; developing sense of integrated response, of harmony in relationships.

(as quoted in Wilkinson et al. 1980, 59-60)

THE ARGUMENTS: THE HARRISON MODEL

For arguments, however, the Wilkinson model poses problems. Because in argumentative writing the self, others, and the physical world, are for the most part not presented in the same way (if at all), a different kind of scale is necessary. In "The Learner as Writer: Stages of Growth", B.T. Harrison had proposed an affective scale that, in fact, later became the basis of Wilkinson's own work. For the transactional writing, we found the Harrison model (which is reproduced in table 4.2) far more fruitful. For purposes of evaluation a subsample consisting of twenty pieces at each level was selected and all were rated according to the Harrison instrument.

ANALYSIS OF THE STORIES

Each of the stories was evaluated and rated on the affective measure according to the following categories: self, other people, reader, environment, and reality. The results were then cross-tabulated by grade (Grades 5, 8, and 12), and the chi-square and significance computed for each cross-tabulation. Tables 4.3 to 4.7 summarize these results.

Table 4.3
Percentage of Stories at Each Level of Affective "Self" Scale

Level	1	2	3	4	5
Grade 5	20.0	40.0	6.7	33.3	0.0
Grade 8	10.0	20.0	20.0	50.0	0.0
Grade 12	0.0	12.1	24.2	60.6	3.0

Raw Chi Square = 13.96074 with 8 degrees of Freedom

Significance = 0.0828

Table 4.4
Percentage of Stories at Each
Level of Affective "Other People" Scale

Level	1	2	3	4	5
Grade 5	9.7	45.2	38.7	6.5	0.0
Grade 8	0.0	35.7	42.9	14.3	6.0
Grade 12	5.8	17.3	65.4	9.6	1.9

Raw Chi Square = 16.30301 with 10 degrees of Freedom

Significance = 0.0913

Table 4.5

Percentage of Stories at Each

Level of Affective "Reader" Scale

Level	1	2	3
Grade 5	31.3	65.6	3.1
Grade 8	11.8	61.8	26.5
Grade 12	5.2	53.4	41.4

Raw Chi Square = 21.96613 with 4 degrees of Freedom

Significance = 0.0002

Table 4.6

Percentage of Stories at Each

Level of Affective "Environment" Scale

Level	1	2	3	4	5
Grade 5	9.4	65.6	15.6	9.4	0.0
Grade 8	5.9	32.4	41.2	14.7	5.9
Grade 12	1.7	24.1	43.1	31.0	0.0

Raw Chi Square = 28.05263 with 8 degrees of Freedom

Significance = 0.0005

Table 4.7

Percentage of Stories at Each

Level of Affective "Reality" Scale

Level	1	2	3	4	5
Grade 5	3.1	37.5	21.9	31.3	6.3
Grade 8	0.0	8.8	26.5	55.9	8.8
Grade 12	0.0	5.2	12.1	77.6	5.2

Raw Chi Square = 29.39966 with 8 degrees of Freedom

Significance = 0.0003

As the tables reveal, the categories where there is clear-cut and significant development from Grades 5 to 8 to Grade 12 are reader, environment, and reality. For the reader category, at each stage the student writers show an increasing ability to anticipate a reader's needs, to determine what is shared knowledge in a given situation and what needs to be explained. Almost none of the Grade 12 papers are at the first level, while over 40 per cent were rated at the top level of that category. In contrast, the Grade 5 percentages are almost the reverse. As to the treatment of environment, there is an equally marked progression from the early stories where there is little if any reference to the surrounding physical world, to a stage where the environment is presented elaborately, to a final stage where the physical details are evoked especially for their dramatic or psychological significance. So, for example, most Grade 5 stories have almost no background detail. The following example is relatively rich: "Back in 1609 there was a roomer about a haunted castle. Of course some people did not believe in it but to those who did it was terrifying. It was always black with a grave yard behind it." By Grade 8 the natural world is evoked far more extensively, as the following two passages suggest:

> It was late at night. The leaves made a crumpling, like an empty plastic bag being crumpled, as they fell to the ground. There wasn't anyone in the street as I sat at my bedroom window looking out onto the bare road which was lightened by the huge, gorgeous, glowing moon.

> It was a hot summer day and I was walking through the valley on my uncle's ranch. I had walked through it many times before as it was my favorite place on the entire ranch, it had a narrow creek trickling through the bottom of it and many tall, shady trees on either side. Today as I was walking through there seemed to be a strange feeling in the air, an eeriness I have never experienced before.

By Grade 12 details are chosen far more selectively and often with the intent of creating atmosphere or revealing character. In the following example the main character awakes, saying to himself: "The sky's grey this morning; overcast. And that damn wind, damp to the bone. What a bloody morning. Up late, dropped everything; couldn't find a damned thing I was looking for and thoughts, those damn doubts in my head." The weather corresponds to and objectifies the internal world of the character. In the following piece, each of the details is incorporated to make a specific satiric point.

> Mommy, cried Annoia and she ran down the hall, with her sticky little fingers making sticky little streaks all over the wall.
>
> "Freeze" cried Hubert, "or I'll blast ya." He laughs as he fires plastic disks from his "modulating Phase Shifter" plastic police pistol, the little coloured disks leave coloured streaks all over the scrubbable paint of the multi-coloured walls.
>
> ...She [Mommy] is all decked out in her classiest household apparel, hair and curlers peeking out behind a multi-coloured scarf and her favorite Sears sucker housecoat with matching slippers.

As to the treatment of reality, there is a marked development as well. Almost none of the students, even at the Grade 5 level, actually confuses fantasy with reality. But far more of the young children simply give literal accounts (both in personal and invented stories) without any evaluation. Increasingly in the upper levels, writers interpret and evaluate the stories they present. The occasional piece at all levels reaches a metaphoric or symbolic interpretation, although rarely in as sustained a form as in Sample Essay 13.

As to the categories of self and other people, although certain developmental trends are apparent in the data, these tendencies are not statistically significant (or rather only approach significance). To understand these trends a little better, we recalculated the cross-tabulations by twos, comparing the Grade 5s and 8s, the Grade 8s and 12s and the Grade 5s and 12s. For both self and other people, there were significant developmental differences (where significance is reckoned as less than 0.05) only between the Grade 5s and 12s.

In other words, there is certainly growth along these dimensions over the years, but the differences are significant only when comparing the two extreme points. This is so for a number of reasons. First, the movement up is gradual. Second, the scale does not (and perhaps cannot) discriminate finely enough. And finally, at each level, there are outliers or exceptions, students who seem considerably more or considerably less mature than their cohort as a whole. Thus, among the Grade 8 stories, there are some whose rendering of other people is as sensitive and extended as that of the best of the Grade 12s, while a few of the Grade 12s seem less sophisticated and mature in this area than all the Grade 8s.

Sample Essay 13 (Grade 12)

She sat alone in a corner, her expression revealing the fear and curiosity which was bottled up inside of her. Her eyes were large and round and contained a sparkle that laughed when she smiled. Her face was like the sun that radiated warmth to all those around. Her skin was pale and she wore a cloak as white as a dove. Her small, fragile figure clashed with the darkness which enveloped her. Her image was fresh and revealed a dawning innocence.

In the centre of the room gathered a group of people dressed in black and waring masks. They were huddled amongst each other, snickering and sneering, and eager to draw the young swan into their tightly woven circle.

He watched from a distance as each of the members from the circle approached her. Their plastic masks discretely hid their true being. She could sometimes see through their masks and her glowing smile quickly faded. He watched discontentedly as she slowly sank deep within herself and the walls around her.

Some members of the darkened group took her hand and led her away; smiling eagerly, she followed. Their faces excited her and promised her experiences never known to her before. The masks cleverly concealed the reality, and the brilliant dreams shone off the masks.

He watched her leave, but each time he remained, for he knew she would return. When she did, it was though a knife was slicing through his heart. The image he loved so much was diminishing before his eyes. Her cloak had turned to grey and life's twinkle had disappeared from her eyes.

She remained in the corner watching coldly those masked villians who robbed her innocence and left only a stone.

She glared as they boasted, promising her wealth, love and happiness. Alas, she had heard all these stories before, and she refused or ignored any advancement.

On the whole, however, there is growth along these two dimensions over the school years: there is far more analysis, and greater sophistication in the analysis, in the portrayal of self and other people. The Grade 12 stories cited in chapter 2 reveal the complexity and depth of the inner lives presented in the stories, where the characters' shifts of moods, inner motives, and changing aspirations are analysed and portrayed with verisimilitude. But the development is, for the cohort as a whole, gradual; at every level there are exceptions who are either considerably in advance of or considerably behind their cohort.

It is important to note as well that the findings described above summarize the data for the stories as a whole. In general, a breakdown by story type shows the same trends except for the categories of self and other people. For the portrayal of self, not surprisingly, the growth is far more marked in the personal stories. In the depiction of other people, there is development only in the invented stories; other people tend to appear very rarely, and when they do appear, on the whole they appear unidimensionally in the stories at all levels.

Pedagogically, this finding argues for the assignment of both kinds of stories at regular intervals throughout the school years. The research implication is that generalizations about affective development within these subcategories ought not be based on one kind of story assignment alone.

THE ARGUMENTS

For the analysis of the arguments, we revised the Harrison model to allow for intermediate stages between the expressive and reflexive stages, the reflexive and identifying stages, and the identifying and organizing stages. Only two students in the whole sample were placed on the lowest rung, the expressive stage proper; and no students at all achieved the integrative stage. Sample Essays 14 to 16 reveal typical instances of three major levels.

On the whole, there is significant development along the affective dimension in the arguments. What emerges is a movement from an awareness of one's own feelings outward, to an empathetic response towards others, and then to a growing sense of commitment on behalf of others, to community and to the world at large.

Table 4.8

Affective Development in Arguments

Level	1	2	3	4	5	6	7
Grade 5	0.0	5.6	5.6	33.3	0.0	44.4	11.1
Grade 8	8.3	12.5	0.0	8.3	12.5	25.0	29.2
Grade 12	0.0	0.0	0.0	17.9	0.0	57.1	25.0

Raw Chi Square = 26.08835 with 14 degrees of Freedom

Significance = 0.0252

As table 4.8 reveals, the difference is particularly pronounced between Grades 8 and 12, where over 82 per cent of the Grade 12s but only 54 per cent of the Grade 8s (which is the same percentage as that of the Grade 5s) are at level 6 or above. At the same time, no Grade 12s are at the three lowest levels, while 10 per cent of the Grade 5s and 20 per cent of the Grade 8s were so placed.

The fact that the Grade 8s seem to be not much more (if at all) affectively mature than the Grade 5s should not be misconstrued: the easy conclusion is that there is no development along this dimension in these years. However, the results of the affective analysis of the stories gives the lie to such a supposition. It is not that there is no affective growth in these years but that such growth is not manifested in arguments.

As we have shown in other studies, the writing of argumentation is a particularly difficult task at the Grade 8 level for a number of reasons. First, it is a new task: most students have relatively little experience with such writing before high school. Second, the students have been exposed to relatively few models of literary argumentation. And third, conceptually the task of organizing argumentative material is considerably more difficult than that of structuring a story (Freedman and Pringle forthcoming). What seems to have happened at the Grade 8 level is that the constraints of this task of writing arguments have absorbed the students to such an extent that they are inhibited along other planes. We have evidence from other studies that the same Grade 7 and 8 students make more mechanical errors when writing arguments than they do when writing stories (Freedman and Pringle 1979). And the data here point to a similar phenomenon: the task is so difficult and so consuming that there is what seems to be backsliding along the affective dimension (when compared to story writing) as students attempt to reach higher along others.

Example of Affective Stage

Sample Essay 14

(Level 2: Expressive and Reflexive Stage)

Problems That Are Happening Around Me

I signed up for jazz last year and I like it alot. I miss the lessons sometimes but most of the times I go. This Saturday I went to Kmart with my friend Heather, we went so we could by our Mother's a Mother's day card and present.

When I got to Heather's house, I took off my raincoat and hat they were soaked. Heather got ready and we went to Kmart. It was pouring of rain and we both got soaked.

I bought my mom a carnation and a silk flower for $1.25 each. I was supposed to go to jazz that day it was Saturday, I go at 1:00 o'clock. I looked at the clock and it was 12:45. I went to find Heather and we rushed home. When I got home my mom was very mad indeed.

My mom paid alot of money for my jazz recitle, and she said I was grounded for a week but she changed it to four days.

Example of Affective Stage

Sample Essay 15

(Level 5: Identifying Stage)

This Composition Is Mainly for Game Hunters

God made many animals and many are still living peacefully on this world, but quite a few are not. Animals like the alligator, lion, whale and others are on the verge of getting extinct.

Why? Scientists say some are dying out because of the changing climets, that is probably true, but the others are dying out because of game hunters.

How disgusting! Just think, some poor little deer are giving up their lives for some women to have fur coats. And now there are so many game hunters that people who don't hunt must make special parks to save wild life. We shouldn't really need wildlife parks or limits of how many can be killed at a time, hunters should know when to stop hunting. But no they don't care about wild life, all they care about is getting money by trapping and killing animals.

We must try to slow down game hunting, please do your best.

Example of Affective Stage

Sample Essay 16

(Level 7: Organizing Stage)

In Ontario the Ministry of Education has made quite a few subjects compulsory. However, Physical Education is not a compulsory course. This system must be changed.

Physical Education is necessary for everyone. Students at the Secondary School level should be compelled to take this course, unless there are health restrictions.

The human body requires a great deal of care in order for it to survive. A major part of this caring is in the form of physical education. At the age of fourteen to eighteen, students should be taught the art of caring for their bodies. A compulsory Physical Education Course will enable the students to keep their bodies healthy.

Organs such as the heart and lungs should be cared for. Physical education, which usually involves running and basic exercises, will keep these vital organs functioning effectively. Since heart attacks are common today, students should be compelled to take a physical education course at school in order to care for the heart and other vital organs. This enforcement will most likely limit these students' chances of being affected by a heart attack in their later life. If students are taught, to care for their bodies and the organs which make up their bodies, throughout their High School years, they will make it a practice throughout their lives.

There are far too many overweight students at the Secondary Schools today. Most of these students are not registered in the physical education program. If the physical education course is categorized as a compulsory course, many of these students would be enrolled in it and thus be physically fit. Students at the Secondary School level must be taught that excess fat is bad for the heart and the rest of the organs. A compulsory physical education course will teach our students how to take pride in their bodies. It is possible that such a course will produce less overweight teenagers in our Secondary Schools.

If our Secondary Schools make physical education a compulsory course, we will bring about a large number of healthy young people. Through such a course, we can help our young people enjoy their lives at present and in the future. Life for these students will be longlasting and enjoyable.

PEDAGOGIC IMPLICATIONS

What is revealed, then, by the use of the Wilkinson and Harrison scales is enormous and exciting growth along the affective dimension as students progress from Grades 5 to 12. Whether or not schooling in general accelerates this growth is a question of some theoretical controversy; it is likely, though, that no specific pedagogic strategies with respect to composition have much effect. The students quite simply grow -- with no help from us. What then are teachers do do with facts such as these? This is an important question, because analyses such as those described in this chapter can be (and have been) used in trivial and damaging ways as well as intelligently and sensitively.

The danger is that curriculum planners will run directly to the classroom with measures such as the affective scales used in this study in order not to describe growth but to prescribe it. Given that development along such dimensions occurs even among the poorest writers without our conscious efforts, why should we direct our already limited time and resources to elicit that which will emerge in any event (except of course to be able to congratulate ourselves ex post facto that the growth was the result of our efforts)? A more serious objection, however, is that these measures are necessarily simplifications of the rich and complex processes that are going on. For research purposes, such simplifications are necessary; for teaching, they are dangerous.

What teachers can gain from an awareness of Wilkinson-type analyses of student writing are the following. First, they may acquire a language for articulating what they had only intuited before -- the complexity and richness of the writing process. By defining other dimensions of the process, teachers may perhaps lay less stress on the surface features of the text, recognizing their relative insignificance in the light of the more central and crucial activities involved. This becomes particularly important in the light of the phenomenon noted repeatedly in this and other studies: when students strive to reach upward along one dimension of their writing, there may be a breakdown along others. If teachers are aware of this phenomenon and these dimensions, they may recognize and reward the growth rather than punish the resulting infelicities.

5 Syntactic Resources

As noted in chapter 1, the features of writing ability that have been reported on so far have been concerned with those aspects of a finished piece of writing that relate to its rhetorical quality as a whole and to the more global aspects of development that lie behind the production of essays. We move now to a different level of writing ability: the level at which the larger rhetorical concepts that give shape to a piece of writing and the more immediate ideational units that are to be reflected in the finished piece are processed linguistically and converted into organized sequences of words. The whole of what is involved at this linguistic level of the production of written discourse is immensely complicated, and no attempt has been made to examine everything that might be taken into consideration. Instead two aspects of the grammar of written discourse are closely examined.

The first is the nature of the linguistic resources drawn on by student writers. There is much that could be examined in this area: the vocabulary that students use, the actual grammar of the sentences they write, the extent to which they can find syntactic structures sufficiently complex to express complex ideas, the extent to which they can control their syntax so that their ideas are in fact expressed effectively, the various textual strategies they might call on to weld their sentences into longer units of discourse, and so on. For a number of reasons, the analysis has been restricted to measures of syntactic complexity. These are the concern of the present chapter, in which we take up some well-studied aspects of the development of writing ability, apply conventional analyses to the papers in our sample, and show how they compare to papers written by other students at the same levels. Although the ability to generate and control complex syntax is not the most important aspect of writing ability, it is an aspect that looms large in the popular concept of what it means to be able to write well.

A second aspect of what is usually referred to as grammar looms in popular discussions of writing ability: the ability to write with an acceptable level of control of the conventions of standard written English. This is examined in chapter 6.

At least in North American writing research, the unit known as the t-unit has been used for nearly twenty years to measure developmental progress in student writing, to demonstrate the effects of particular pedagogical treatments, and to investigate the performance differences of student writing in different modes (for a review of the research see Witte 1983). The t-unit, or "minimal terminable unit", consists basically of an independent clause and all the dependent or conjoined structures attached to it that would be grammatically incomplete if detached. For example, "Ian left the staff party as soon as he could" constitutes one t-unit because "as soon as he could" is grammatically dependent; "Derek sang

and danced at the staff party" is one t-unit because "and danced at the staff party" is grammatically incomplete by itself. However, "Mary spoke huskily at the staff party and Pauline did her usual imitations" constitutes two t-units.

It is highly likely that, in good writing at any level, a t-unit represents a single conceptual unit. If so, the validity of t-unit analysis depends on the fact that, as writing skills mature, writers learn to become increasingly skilful at subordinating and to use more complex structures of modification as they strive to express more complex ideas. This fact seems to be well established in the relevant research (Hunt 1965, 1970; O'Donnell et al. 1967; Loban 1976), and thus justifies the frequent use of t-unit analysis in measurements of the effects of sentence-combining instruction (Mellon 1967; O'Hare 1976; Stewart 1978a, 1978b; Daiker, Kerek, and Morenberg 1979; Kerek, Daiker, and Morenberg 1980).

For school-age children, the status study that attempts to show typical levels of competence for all grade levels and for three ability levels within each grade is Loban 1976. This work, published by the National Council of Teachers of English (U.S.), reports the results of a massive twelve-year longitudinal study conducted at the University of California, Berkeley, and funded for most of its duration by the U.S. Office of Education. Like Hunt's 1970 study, Loban's has been widely accepted as having established norms for student performance.

Recent research has begun to question the validity of t-unit scores (Harris and Witte 1980; Witte and Davis 1980, 1982). In particular, it is clear that t-unit scores are highly sensitive to differences in the mode of writing, as was first demonstrated in Crowhurst 1978 and confirmed in the Carleton Writing Project I (Freedman and Pringle 1979; see further, Crowhurst and Piché 1979 and Crowhurst 1980). Such research demonstrates that the status studies need to be repeated in order to establish typical scores by mode as well as by age and ability level.

That being the case, however, it is all the more striking that all the other research investigating syntactic complexity in school-age children has turned up scores close to the random-to-high range established by Loban for any particular grade. It is clearly the case that, whatever its imperfections, the t-unit is a fairly reliable indicator of developmental trends in student writing.

In computing t-unit scores for the writing in our sample, we looked at four sets of scores in order to allow for full comparison to other studies. Only one score is common to all such studies: the computation of the mean number of words per t-unit. The other three are all used in at least one other study: the computation of the mean number of t-units per sentence (Hunt 1965), of dependent clauses per t-unit (Loban 1976), and of words per clause (O'Donnell et al. 1967; Hunt 1965, 1970). In addition to these studies, all of which were conducted in the United States, we cite in the comparisons that follow the mean scores reported in the Carleton Writing Project I and II (Freedman and Pringle 1979, 1980) and in Marion Crowhurst's study conducted in Brandon, Manitoba (Crowhurst 1980).

These scores measure somewhat different aspects of syntactic complexity. The proportion

of t-units to sentences tends to reflect a clear developmental trend according to which less mature writers typically use a higher proportion of conjoined main clauses within sentences, whereas more mature writers use a higher proportion of subordinated structures attached to main clauses and gramatically dependent on them. Thus, as writers mature, the proportion of t-units to sentences tends to diminish until it reaches one. Sample Essay 17 is an example of particularly immature syntax in which the t-unit to sentence ratio is quite high.

By contrast, Sample Essay 18 has a t-unit to sentence ratio of 6 to 5, which is close to mature adult norms when there is no control for the mode of writing. Since both of these essays are by Grade 5 students, their contrast brings out an important point: t-unit per sentence scores are clearly very sensitive to the mode of writing. The author of Sample Essay 18 is certainly a more competent writer than the author of Sample Essay 17. But the difference in the t-unit scores of the two papers results above all from the fact that 17 is a narrative whereas 18 is transactional. It would be inappropriate to use t-unit per sentence scores as the basis for any judgement of a student's writing ability without taking into consideration the many other factors that may be at work.

Whereas scores for t-units per sentence tend to suggest the extent to which a writer is able to use subordination rather than co-ordination as a means of expanding sentences, the three remaining scores suggest more precisely what kinds of strategies are being used when strategies other than co-ordination are called on. Obviously the number of finite dependent clauses per t-unit simply constitutes a raw count of the amount of finite subordination that a writer has produced in a particular piece of writing. The computation of the mean number of words per t-unit, on the other hand, measures all devices used to expand t-units, and the computation of the mean number of words per clause breaks down that score by examining it in relation to the number of clauses produced. If these three sets of scores correlate highly, then the implication is that most of the expanded length of the t-units results from finite subordination. If they do not, then it is likely that the increased length of t-units results from two other strategies: expansion of t-units by conjoining smaller elements than whole clauses (e.g., conjoining within the predicate, or in prenominal modification), or a greater use of non-finite clausal structures. Both of these strategies are more likely to be called on by more able and more mature writers. The last can have the effect of making the writing of particularly able writers actually achieve lower scores than less able writers of the same level writing in the same mode on a similar topic.

In themselves, then, the aspects of syntactic complexity measured in these ways do not guarantee good writing. On the contrary, syntactic complexity can be associated with quite bad writing. For example, Sample Essay 19 is a Grade 5 argumentative paper that constitutes (or at least can be analysed as constituting) a single t-unit -- a t-unit that is abnormally long. The paper betrays a fairly common phenomenon: the cognitive demands of what the child wants to say have actually outstripped her linguistic ability to generate and control appropriate syntactic structures. If this essay is analysed as constituting a single t-unit, then (since it is 78 words long) its words per t-unit score is 78. Loban's norms for students at this level are a mean of only 9.72 for his high group, and of 8.76 for his random group.

Sample Essay 20 shows a related phenomenon. Again there is evidence of cognitive stress

in the writing, but in addition the syntactic control seems to have been shaken particularly by the vehemence of the emotion the writer is showing. This paper has a t-unit per sentence ratio of 1:1, but it is not by any standard a good paper.

Conversely, some students, like some professional writers (Hemingway, for example), are quite successful in getting literary effects by using rather limited syntactic resources, as in a memorable horror story written by a Grade 12A student. In this story, which is almost 700 words long, the words per t-unit ratio is only 10.27, compared to 11.24 for Loban's low group at Grade 12. The story begins like this:

> I stood there on the balcony of our hotel room, dreaming of the day of skiing ahead of us. The night was calm, but the air had a certain crispness to it. We were at such a high altitude that just a few deep breaths would suffice to put you in a state of relaxation. My friend Dave had already been sleeping for several hours, but I stayed awake to tune our ski equipment to perfection. As I re-entered the room, I heard a distinct growl. It was coming from inside the room. I flicked on my bedside lamp and took a look around the room. Dave lay sprawled across his bed. He was slithering and squirming eratically. His face grew pale as the grunting became more frequent. I ran across the room and grabbed his arm. A smashing right fist caught me at the side of the head. I fell to the ground, where I lay motionless for the rest of the night.
>
> The next morning I woke up with a tremendous bruse just above the temple. I cautiously looked around the room. Surprisingly, the smell of sizzling bacon filled the room. Dave was quietly preparing breakfast. He was calm, and was obviously trying to avoid making to much noise. I walked towards him, hiding the pain that I felt.
>
> "Heh, d'you sleep good?" he asked in his usual casual manner.

Where particular students and particular pieces of writing are under consideration, then, t-unit scores cannot sensibly be used diagnostically unless the writing is carefully examined to ensure that high t-unit scores are not a result or a lack of syntactic control, or low t-unit scores evidence of an effective individual style. However, as an evaluative measure of the linguistic resources of a large population of students as represented by a random sample, t-unit scores are valid, and they are even more valid as a measure of the maturation of those resources. By this measure, the average level of performance of the students whose writing we studied was at every level outstanding.

Tables 5.1, 5.2, and 5.3 present the relevant t-unit scores for Grades 5, 8, and 12 respectively, with the scores broken down by mode wherever possible, and in the case of the Grade 12 students in this study broken down according to whether they were in the general or the academic stream.

Sample Essay 17 (Grade 5)

My friend and I were walking down the street. But then we were grabbed and we tried to fight them off. but it was no use they had us like a can of sardines It was so dark we bumped into each other in the dungeon we were wondering how to get out we saw a passage but we said we shouldn't take it. But then it was the day of exhaustion we were about to be killed but we took a trapdoor and we were back on the street and we kept on running and running.

Sample Essay 18 (Grade 5)

I feel that Canada should not be shipping nuclear fuel to Argentina or any country. Atomic energy is very powerful and if the Argentinians use the energy agaist the British troops they will suceed in capturing the Falkland islands. The very least we could do is to delay the shipment of nuclear fuel until England regains the Falklands. If we can stop a small atomic war we would have done a great deed to England and Britain, even maybe Argentina. A Atomic war is a great disaster.

Sample Essay 19 (Grade 5)

I wish that the world ought to have a new way of transporation for the children of the world and a new play ground for all the kids to play. And a new school built for the parents and teachers and not for the kids that wants too. And also that kids can have as match freedom if they want. And one more thing I wish that the parents shouldn't be so greedy about homework getting done.

Sample Essay 20 (Grade 5)

Russia the continent that is loaded with nuclear weapons why do they have to arm themselves with such power? What and who do they think they The king of the world or something. Brenez [i.e. Brezhnev] the twit who orders them to make more. They already have enough nuclear weapons to blow up half or the whole world. Why do they need so many Nuclear weapons?

Table 5.1

Mean Syntactic Complexity Scores
at the Grade 5 Level and Comparative Data

	O'Donnell et al.	Loban 1976			CWP II	Edmin 1982		
		Low	Random	High		Arg	Pers	Inv
Words Per T-unit	7.67	6.29	8.76	9.50	9.20	12.400	9.43	9.09
T-units Per Sentence					1.28	1.190	1.25	1.36
Dependent Clauses Per T-unit		0.14	0.21	0.35	0.38	0.754	0.36	0.35

Table 5.2

Mean Syntactic Complexity Scores
at the Grade 8 Level and Comparative Data

	Hunt 1965	Hunt 1970			Loban 1976			CWP II	CWP I		Edmin 1982		
		Low	Mid	High	Low	Random	High		Nar	Arg	Arg	Pers	Inv
Words Per T-unit	8.6	7.55	10.3	11.7	9.49	10.4	11.2	14.7	11.1	15.9	14.09	11.15	11.2
T-units Per Sentence	1.37							1.22			1.15	1.29	1.21
Dependent Clauses Per T-unit					0.4	0.5	0.54	0.95	0.47	1.04	0.84	0.43	0.52

Table 5.3

Mean Syntactic Complexity Scores at the Grade 12 Level and Comparative Data

	Words Per T-unit	T-units Per Sentence	Dependent Clauses Per T-unit
Hunt 1965	14.4	1.17	
Hunt 1970			
Low	10.2		
Mid	11.5		
High	12.3		
Loban 1976			
Low	11.2		0.52
Random	13.3		0.60
High	14.1		0.66
Crowhurst 1980			
Narrative	12.5		
Argument	16.0		
CWP II	16.8	1.15	0.92
Edmin 1982			
12G			
Argument	16.70	1.16	0.93
Personal Narrative	11.61	1.2	0.52
Invented Narrative	12.39	1.16	0.58
12A			
Argument	15.92	1.17	0.68
Personal Narrative	13.01	1.18	0.54
Invented Narrative	13.12	1.15	0.55

The table for the Grade 5 results (5.1) shows that the students in this sample (here labelled "Edmin 1982") surpassed the results of all the other students in each of the other studies cited with the single exception of the words per t-unit scores, where Loban's "high" group scores slightly exceed those of the students in this study who wrote an invented or personal narrative. Not unexpectedly, the scores achieved in the argumentative mode are remarkably high compared to the norms established for other students at this level, including even the socio-economically and academically privileged students who were O'Donnell's subjects.

Equally, the Grade 8 scores are comparable to the best scores achieved by Loban's students and those in Hunt's 1970 study, with the scores for words per t-unit equal to or higher than all others except those of the students writing in the argumentative mode in the Carleton Writing Project I and II (Freedman and Pringle 1979, 1980).

In many ways the Grade 12 scores are the most remarkable. Those for the Grade 12G group are particularly impressive, compared to those of other Grade 12 groups. Those of the Grade 12A students seem to be inferior. In reality they are merely lower: as we have mentioned, students in this group are already beginning to show more mature syntactic strategies which have the effect of lowering t-unit scores slightly.

All in all, these results speak well for the syntactic skills of the students in the population from which our sample was drawn. Even in the narrative mode, the scores achieved by the students sampled exceed most of the other scores reported at the same level. The scores for the argumentative writing in our sample are at a comparably high level.

This achievement is remarkable enough in itself. But its full significance can be appreciated only by comparing the nature of the sample in the various studies. To our knowledge, only one study using t-unit analysis has ever investigated a writing sample validly representative of a larger population: the Carleton Writing Project II (Freedman and Pringle 1980). The latter study undertook an analysis of the writing of the 710 students in the primary sample, representing the 7720 students from whom the sample was drawn. The present study, it will be remembered, analyses the writing of 636 students, representing with even greater validity than the Carleton Writing Project II the 6360 students from whom the sample was drawn.

By contrast, Hunt's 1965 study reported on the performance of 9 boys and 9 girls at each of Grades 4, 8, and 12. They were eligible for selection because they received scores of 90-110 on the California Test of Mental Maturity, but they were not selected randomly. His 1970 study reported on the performance of 17 "high" ability, 16 "middle" ability, and 17 "low" ability students at each of Grades 4, 6, 8, 10, and 12. The ranking of the students into these three groups was undertaken on the basis of a number of relevant test scores, so that on this basis the 250 students in the study represented the 1000 students from whom they were drawn. However, the original group of 1000 was again not a random sample. Crowhurst's 1980

study reports scores for 20 boys and 20 girls randomly selected from each 223 students in eight Grade 6 classes, 228 students in eleven Grade 10 classes, and 206 students in ten Grade 12 classes in Brandon, Manitoba. Although the selected students in this study represent the population from which they were drawn with a high degree of validity (the sampling ratio is over 20 per cent), that population is none the less not representative of all the students in the grades in question, and the total population the sample represents is 677 students in all. Loban's 1976 study reports the scores for three groups of students, only one of them a random sample, from the 211 students remaining of an original total of 338 subjects who were considered on the basis of demographic data to be a representative cross section of children entering the public school system in Oakland, California, in 1953. Given the much larger number of students in our population than in any of these studies, and the representativeness of the sample we drew, it is clearly fair to say that the students whose writing we studied can draw on syntactic skills superior to the norms expected at their grade level. Indeed, their performance is so much superior to the putative norms that it suggests the status studies need to be repeated, not only to control for mode, as we have already noted, but also to ascertain whether the results found in other studies are not lower than the norm should actually be. But at all events, although the details of the t-unit analysis have to be viewed with some caution, all in all they suggest that there is no reason for concern as to the kinds of syntactic resources accessible to the students whose writing we studied.

6 Mechanics and Conventions

In almost all respects, the various aspects of writing ability reported on hitherto seem to us to be the most important. Politically, however, they may well be the least important. Whenever an alarm is sounded about the quality of student writing, the feature of the writing that is singled out for critical comment is not its rhetorical control, its developmental status, its syntactic resourcefulness, or even its meaning. Rather, the only point at issue seems to be the control of mechanics and of certain usage conventions. Some of these are genuinely valid, but some of them are merely traditional pseudo-problems that have taken on the status of shibboleths that can be used to prove that students are not members of the tribe of the truly literate.

In part, we confess, we agree. If mechanics are so weak that they prevent communication, then there is certainly a real problem. But that is not the case in any of the papers we examined. The only problem which ever threatened to make it difficult to read a paper was handwriting that was too faint, excessively mannered, or (in the case of some Grade 12 students) too much like a rapid, rather careless, adult hand.

However, we are not concerned here with handwriting, but rather with those features of standard, edited, written usage that the public expects students to master, in large part, while they are at school: the conventions of standard spelling, correct punctuation, and acceptable usage. In order to check student achievement in these areas, we scored every single paper in the sample for five broad categories of error: spelling mistakes, punctuation mistakes, errors in pronoun usage, errors in verb usage, and a final mixed category. Each of these categories was broken down further so that errors could be classified more precisely. In the first two categories, we provided for an "other" subcategory, so that every single instance of a spelling mistake or a punctuation error was counted. So too, every choice of an "incorrect" form in those matters of divided usage which we are calling "shibboleths" (discussed further below) were identified and counted. In addition, we identified and counted a wide selection of clearly non-standard forms.

With the exception of spelling mistakes, punctuation errors, and violations of shibboleths, we did not aim to classify every instance of every error. Some students made errors that do not show up in our tabulations. However, all were identified, and almost all were classified. The range of errors of different types that we classified is so large that we are confident that we can accurately and fairly describe students' abilities in this problematic and sensitive area.

TYPES OF ERRORS

Within the broad category of punctuation errors, we identified ten specific types of errors. We illustrate each of these below from student papers.

The first is the run-on sentence, created when a period is omitted at the end of one sentence and the first word of the next is not capitalized, as in the following examples:

> The horse itself was brown and white all over its name was Becon
>
> It was the day my dream came true it was a Saturday afternoon
>
> Another friend of mine was Sonny he thought he was the best in every thing
>
> Something must be done about these traffic tie up not only are they aggravating and frustrating they are extremely uncomfortable

The second category is the comma splice, created when two sentences are spliced with a comma and thus are punctuated as though they were a single sentence. It should be noted that comma splices are a fairly common feature of edited professional writing, so that technically this is a violation of a shibboleth rather than an outright error. In student writing, however, comma splices rarely have the apparent purposefulness of those in adult writing. They fall for the most part into three definable patterns: the first sentence is causally related to the second; the second is a narrative event almost simultaneous with the event in the first sentence and closely related to it; the second sentence is related to the first by apposition.

> So my advice is to try "Love" for a change, it just might work! (Grade 5 argument)
>
> I felt sick to my stomach after that, I couldn't believe that I had been out (Grade 8 narrative)
>
> They smuggle drugs into the country in large ships, how they get past customs, I don't know (Grade 8 argument)
>
> The person was in the room, he was now approaching the door. (Grade 12A narrative)
>
> The student doesn't realize this, the teacher when confronted repeats the question allowed (Grade 12A argument)

The third category is the "fragment", when a unit that is grammatically less than a complete sentence is punctuated as though it were complete. This too is a standard feature of edited professional writing in which it usually has a definite rhetorical function. Again, then, we are dealing with the violation of a shibboleth rather than an outright error. Some student sentence fragments undoubtedly represent a striving for rhetorical effectiveness:

> Yea, back to the good old days, driving the old fords and all those Bonnie and Clyde type characters that rob them national banks (Grade 8 narrative)
>
> The doll -- a symbol of love and the days I was little (Grade 12G narrative)

However, many more are undoubtedly the result of carelessness or ignorance.

The next three categories deal with apostrophes. We reserved one category for confusions between possessive adjectives or determiners (its, your, their, theirs) and their contracted homophones (it's, you're, they're, there's), as in: "its not the cow its his owner" (Grade 5 argument); "it's piercing and brilliant rays" (Grade 8 narrative) "when you think about it its pretty sad (Grade 8 argument); "Many people want it's power" (Grade 12G argument); "The church is losing it's grip on peoples consciences" (Grade 12A argument).

A second category captured other instances of the omission of apostrophes for possession: "Kevins house" (Grade 5 narrative); "not peoples health" (Grade 5 argument); "other peoples houses", "out of each others lives" (Grade 8 argument) "todays society", "the persons grasp", "companys needs" (Grade 12A argument).

The third category captured other instances of the omission of apostrophes for contraction: "Lets go" (Grade 5 narrative) "That's the way it is for stores" (Grade 5 argument); "I wouldnt have" (Grade 8 narrative); "thats what I think" (Grade 8 argument); "they wont" (Grade 12G argument); "lets go" (Grade 12A narrative); "dont" (Grade 12A argument).

We would note in passing that any future study should also have a category for the converse error of inserting unnecessary apostrophes. In this study instances of this error, which proved to be quite frequent, are included in the category "Other Punctuation Errors".

Two further categories captured errors in capitalization other than those caused by run-on sentences, comma splices, and fragments. The first is the use of a capital letter when a small letter is required: "people Smoking cigirets and Dope" (Grade 8 narrative); "Dental and Doctor bills" (Grade 8 argument); "I had a sore Mouth" (Grade 12G narrative); "Child Abuse, a Common problem in today's society" (Grade 12G argument); "There are wars between Nations" (Grade 12A argument).

The other is the converse, the use of small letters for capitals: "east Germany" (Grade 5 argument); "at his lot of land just past smith falls" (Grade 8 narrative); "a small hotel named the paradise", "sounded like english" (Grade 12G narrative); "It is known that argentina is" (Grade 12A argument).

The two remaining categories of specified punctuation errors are the omission of question marks ("why do you all of a sudden want them back" in a Grade 5 argument; "Why should people have to feel this way" in a Grade 12A argument), and the omission of quotation marks. The latter are usually omitted in pairs, but some students mark only the beginning or the end of the quoted passage.

The final category is the ragbag "other" category into which any further punctuation errors were stuffed. Two types of errors account for the greatest proportion of these scores. The first is the insertion of unnecessary apostrophes: "one of the Worlds super power's" (Grade 5 argument); "who know's", "my sister's were in the back" (Grade 8 narrative); "some tough guy's started bugging him" (Grade 12G narrative); "the home of the Craig's" (Grade 12A argument).

The second is a series of closely related comma faults: the omission of required commas in a series ("I got up went downstairs and had breakfast," (Grade 8 narrative); the omission of one of the two commas around a parenthetic insertion or a non-restrictive relative clause ("John however, was used to...", (Grade 12G narrative); and the insertion of a comma between subject and predicate when the subject contains post-nominal modification ("The greatest source of fresh water on the face of this earth, is the Great Lakes", (Grade 8 argument).

Just as we distinguished many different types of punctuation error, so too we classified most spelling errors by type. The first category is the confusion of homophones: "Are hole team when down on the bus" (Grade 5 narrative); "I don't think it's fare" (Grade 5 argument); "will except your application" (i.e., accept, Grade 8 argument); "ran wright by him" (Grade 12G narrative); "one of there favorite dating places" (Grade 12A narrative); "The torries nearly one a majority" (Grade 12A argument).

A second category, which we label "colloquial phonetic", involves the direct phonic representation of typical pronunciations: "a couple of sailin men" (Grade 5 narrative); "wot happened" (Grade 5 argument); "everybody jus sat there" (Grade 8 narrative); "my dad's gettin married" (Grade 8 argument).

The third category, "other phonetic errors", involves spellings that are phonically defensible (in that they follow English spelling conventions) but that are used in words where they happen to be wrong: "I could here sighrens," "many old coughens" (Grade 5 narrative); "canipee", "hydrogen bomm" (Grade 8 narrative); "we use to", "Let see" (Grade 12A narrative); "who mame and kill" (Grade 12A argument).

Among spelling errors we also considered two categories of errors in word boundaries and word division. In one group we collected all instances of the treatment of the article a as though it were a prefix and the converse representation of prefix a- as though it were the indefinite article: "Canada is apart of these talks" (Grade 5 argument); "We had alot planned" (Grade 8 narrative); "after awhile" (Grade 12G narrative); "Alot is this learning" (Grade 12A argument); "ran a way" (Grade 5 narrative); "move a round" (Grade 8 narrative).

The second category collected all other types of word-division errors. This includes separations of compound words (usually nouns) traditionally written as single words: "cob webs" "a grave yard" (Grade 5 narrative); "running foot steps", "with out any help" "small mouth base" (Grade 12G narrative). It also includes the somewhat more common error of representing separate words as one: "atleast" (Grade 5 argument); "a typical sumersday", "boy did that kid shutup fast" (Grade 8 narrative); "inbetween" (Grade 8 argument); "there is noway it can improve itself" (Grade 12G argument); "the nearest offramp" (Grade 12A narrative).

Finally, and most importantly, it collected instances of faulty word division at line ends. Following the example set by the nation's newspapers, students at all levels revealed repeatedly that, if they reach the end of a line before they reach the end of a word, they have no hesitation in dividing words at any point, with no reference to etymology, traditional rules, a reader's convenience, or common sense. "Sighing" can be divided between the g and the h, "divide" before the final e.

The last category of spelling errors was again a "leftover" category for any remaining errors. Some of these were hypercorrections, resulting from an excessive concern to avoid common traps, such as "decited" (Grade 8 narrative) for decided (probably resulting from a determination to avoid the phonetic error that leads to representing matter as "madder"). A goodly number were approximations too far removed from normal pronunciation to be explained as either phonetic errors or hypercorrections: "I felt abandent" (Grade 5 narrative); "srike", "Solviet Union," "mind fields" (Grade 5 argument); "bank rubberies", "absessed on bring[ing] in this man dead or alive" (Grade 12G argument). Some were clearly the result of an imperfect visual impression of a word, such as "riasing" for raising in a Grade 5 narrative paper. Finally, a number were apparently pathological spellings, some of them undoubtedly the result of mere carelessness ("moring" for morning), and some clearly the work of students who really have not mastered English spelling conventions.

Among errors relating to pronoun usage we first noted instances of oblique forms in subject roles, most of which involve a conjoining or apposition: "Susan and me were still laughing away", "me and my cousin were out" (Grade 5 narrative); "us suckers in Ontario are letting them", "us, Canada, don't have very much" (Grade 8 argument). Second, we noted instances of nominative forms in non-subject roles, almost all of them hypercorrect "I" in conjoined structures: "for my brother and I" (Grade 5 narrative); "one of my friends and I", "called my friend July and I" (Grade 8 narrative). We also looked for instances of oblique forms in subject complement roles: "There was me my sister sue my friend Kelley and mom and dad" (Grade 8 narrative).

A quite different type of pronoun "error" (actually a violation of a shibboleth) is the use of they, them, their with a semantically indefinite but grammatically singular antecedent: "Someone found him and we saw them" (Grade 5 narrative); "everyone had to abandon their homes" (Grade 8 narrative); "a person who is smoking ... their health" (Grade 8 argument); "an unimportant person ... someone... they" (Grade 12G argument); "if he or she feels that they are not socially accepted" (Grade 12A argument).

An apparently similar but in fact unrelated error, here identified as "vague pronoun reference", involves the use of they with no explicit antecedent at all: "Dogs like to be walked but where can they take them out on the highway?" (Grade 12G argument).

Such kinds of vague reference we combined with violations of the putative rule of written discourse requiring that there be an identifiable surface noun phrase, rather than an inferred concept or a complete sentence, to serve as the antecedent of it, they, and which: "The

basements were flooded, which wrecked quite a bit of furniture" (Grade 8 narrative); "the world can't survive if it's always like this" (Grade 8 argument); "I noticed that my gas tank was empty, this was a relief" (Grade 12A narrative).

Yet another pronoun error involves shifts in the person of pronouns when they have the same referent, or the use of a second- or first-person pronoun with a generic noun phrase as its antecedent: "A person does not know the meaning of pressure until you are ... put in the position of our shoes" (Grade 12A narrative). One Grade 12G student writing an argument successively shifted the topic of his generalizations from you to we to you to people to they and finally back to you.

Other types of pronoun error involve shifts in the gender of a pronoun ("it could blow fire out of his mouth", Grade 5 narrative); lack of agreement in reflexives ("Dear readers, I'm trying to get you to help your self", (Grade 8 argument); and negation of auxiliaries after indefinite pronouns with universal reference ("everything taught won't" instead of "nothing taught will").

Among errors relating to verbs, we noted the occurrence of disputed forms such as "gotten" and confusion of the "correct" forms of lay and lie, since violations of these shibboleths are sometimes considered to be errors. We also identified and counted genuinely substandard verb forms such as "ringed" (i.e., rang, Grade 8 narrative) or "we had went" (Grade 12G narrative). Among agreement errors we distinguished those resulting from the phenomenon known as "attraction". Such errors occur in edited written prose, but we believe that when they are noticed they are always judged to be errors. A typical example is "the sound of footsteps ... were" (Grade 12A narrative). All other agreement problems were lumped together. They include the use of singular agreement after conjoined noun phrases that apparently express a single, though complex, concept (again a phenomenon familiar in adult prose, but usually judged wrong when noticed), as in "The impatience and stress builds" (Grade 12A argument). They also include the use of singular forms of be after existential there when the postponed subject is plural: "there was always lovers there" (Grade 8 narrative); "there was a few half-demolished barns" (Grade 12A narrative). Finally, they include outright substandard forms such as "here we comes" (Grade 12G narrative) and "The Governments feel's" (Grade 12G argument). Apparently random changes of tense we usually judged to be the result of distancing problems and therefore grouped them with the pronoun errors diagnosed the same way. Failure to use were in conditional and concessive clauses was not judged to be an error ("If capital punishment was to come out fully enforced", Grade 12G argument).

In addition to the clearly substandard forms already mentioned, we also noted examples of clearly substandard adverbial usages such as "Everything went perfect" (Grade 12G narrative) or "The rest of the day went pretty good" (Grade 12A narrative). We did not score instances of double negation and double comparison ("more better"); there were only a couple of instances of each of these errors in the whole set of papers analysed.

All the remaining errors identified and scored were examples of what we have already called violation of shibboleths. By the term shibboleth we mean certain of those matters of

divided usage that are typically discussed in handbooks of usage. In the prescriptive tradition, one of the two possibilities is always regarded as "correct" and the other as "incorrect". In the professionally edited written prose of professional writers, however, both forms occur, and on that basis both must be regarded as standard. Among the shibboleths we identified, we have already mentioned comma splices, sentence fragments, the use of they/them/their after singular indefinite antecedents, the "vague reference" of this, which, and so on with a sentential referent rather than a noun phrase, and disputed verb forms such as gotten.

The others we identified were, first, disputed adverbs ("he was going slow", Grade 5 narrative), the placement of only in positions other than directly before or after what it modifies ("Science teachers that only mark under one basis", Grade 8 argument; "Crime, unfortunately, does not only take place in the streets of the Bronx", Grade 12A argument); misplaced and dangling participial modifiers ("After skipping a couple of days and getting caught, the principal will give you a few more days off", Grade 12G argument); sentence-final prepositions ("a safe place to live in", Grade 5 argument; "no nob to flush the toilet with", Grade 12A argument); split infinitives ("a scaredy cat to not call them names" Grade 8 argument; "to clearly show", Grade 12G argument); and who for "correct" whom. Two ragbag categories were provided for any other violations of shibboleths. The only other one that occurred with any noticeable frequency at all was the use of like as a conjunction for "correct" as.

In the previous section, the quotations illustrating the various error types certainly confirm that it is possible to find, in a collection of more than 600 student papers, at least one example of almost any possible error. In addition, the quotations show that many errors occur at every level and in both modes. However, the presence of a single error is of no significance at all. In order to determine more precisely how successful students are in avoiding mechanical and conventional errors, we made several different kinds of computations. First, we examined the distribution of the raw frequencies of the errors. Second, we calculated the proportional frequency of errors by dividing the raw frequencies by various appropriate constants in order to compare performance by age and mode. In addition, we looked at the pattern of error in selected papers.

DISTRIBUTION OF ERRORS

The first set of tables (tables 6.1 - 6.6) shows the percentage of papers, by grade and mode, that had no instances, one instance, or two or more instances, of errors. In preparing this computation, we first examined the distribution pattern of every single error type. This analysis revealed that a majority of error types had an extremely low incidence of occurrence, with as many as 98 per cent or 100 per cent of the papers in any cell showing no occurrence of it at all -- that is, in many cases there was only one paper in any cell that showed any instance of it, or none at all. Since the amount of space required to report every tabulation for every cell would have been considerable and the advantages slight (given the low incidence of so many of the errors), we combined the errors into various categories.

Table 6.1

Percentage of Papers Containing

Instances of Grouped Punctuation Errors, by Mode

		Argument	Narrative	
			Personal	Invented
Grade 5	0	19.8	11.9	8.7
	1	19.8	16.7	8.7
	2+	60.4	71.4	82.7
Grade 8	0	11.9	13.2	9.8
	1	10.7	7.9	2.4
	2+	77.5	78.9	87.8
Grade 12G	0	12.9	5.9	8.3
	1	22.6	0	0
	2+	64.5	94.1	91.7
Grade 12A	0	14.6	25.9	10.5
	1	11.2	0	13.2
	2+	74.0	74.1	76.3

What this first set of tabulations shows is that, for any grouped error type, the number of papers with no incidence varies considerably, ranging from a mere 3.7 per cent for spelling errors in Grade 12A personal narratives to 100 per cent for the combined category "all adverbial errors" in Grade 5 invented narratives.

The figures cited in the combined categories also show that there were relatively few students who succeeded in completely avoiding certain types of error, and this is particularly the case with the combined categories of punctuation (table 6.1) and spelling (table 6.2). A detailed examination of the figures for spelling and punctuation, broken down into particular errors, showed that the vast majority of students did not commit any particular error that was counted. However, almost all of them had at least one punctuation error of some kind, and in fact most of them had two or more. Similarly for spelling, when any particular subtype of spelling error was examined, it proved to be the case that most students did not commit it at all; overall, however, the students had a fairly high incidence of spelling errors, and the combined figures again show that most students had at least two spelling errors of some type

Table 6.2
Percentage of Papers Containing
Instances of Grouped Spelling Errors, by Mode

		Argument	Narrative	
			Personal	Invented
Grade 5	0	13.9	14.3	4.3
	1	19.8	16.7	10.9
	2+	66.6	69.0	84.6
Grade 8	0	17.9	13.2	9.8
	1	23.8	10.5	2.4
	2+	58.6	76.3	87.8
Grade 12G	0	12.9	11.8	0
	1	12.9	29.4	0
	2+	74.3	58.8	100
Grade 12A	0	24.7	3.7	18.4
	1	21.3	37.0	15.8
	2+	53.8	59.3	65.8

per paper. The five remaining categories of grouped errors shown on tables 6.3 to 6.6 obviously have a lower frequency. In addition, the results suggest that these errors are fundamentally different in nature from the spelling and punctuation errors.

It seems to be the case, then, that the students whose writing we examined are relatively weak in both punctuation and spelling. However, the seriousness of the problem cannot really be gauged by the kinds of tabulations reported in tables 6.1 to 6.6, because such tables do not take into account the length of the papers.

PROPORTIONAL FREQUENCY OF ERRORS

In order to determine more fairly what the incidence of errors is, we undertook a second set of computations to establish the proportional frequency of various errors by dividing the raw incidence by various constants. For example, the proportional frequency of spelling errors

Table 6.3

Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 5

		Argument	Narrative	
			Personal	Invented
All Pronoun Errors	0	62.4	71.4	71.7
	1	17.8	14.3	19.6
	2+	19.8	14.4	8.7
All Errors Resulting From Distancing Problems	0	62.4	78.6	73.9
	1	19.8	7.1	13.0
	2+	17.9	14.3	13.1
All Adverbial Errors	0	92.1	88.1	100.0
	1	5.9	11.9	
	2+	2.0		
All Verb Errors	0	85.1	78.6	82.6
	1	12.9	19.0	8.7
	2+	2.0	2.4	8.7
All Other Incorrect Usages	0	72.3	78.6	82.6
	1	16.8	19.0	97.8
	2+	10.9	2.4	100.0

was established by dividing the raw incidence of errors by the total number of words in each paper. Similarly, the incidence of punctuation errors that are relevant at the sentence level (e.g., run-on sentences and fragments) was reduced to a proportion by dividing their incidence by the number of sentences in each paper. In the same way, the proportional incidence of certain other errors was established by dividing their raw frequency by the total number of t-units in each paper.

It should be noted that such computations are not necessarily the most revealing. Ideally, to determine, for example, how often students really fail to use a question mark where it is required, one should divide the incidence of omitted question marks by the sum of

Table 6.4

Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 8

		Argument	Narrative	
			Personal	Invented
All Pronoun Errors	0	54.8	57.9	63.4
	1	19.0	23.7	22.0
	2+	26.3	18.4	14.6
All Errors Resulting From Distancing Problems	0	53.6	55.3	70.7
	1	20.2	15.8	17.1
	2+	26.2	28.9	12.1
All Adverbial Errors	0	90.5	89.5	95.1
	1	8.3	5.3	4.9
	2+	1.2	5.3	
All Verb Errors	0	81.0	57.9	68.3
	1	17.9	28.9	22.0
	2+	1.2	13.2	9.7
All Other Incorrect Usages	0	77.4	60.5	80.5
	1	10.7	26.3	17.1
	2+	12.0	13.2	2.4

those correctly used and those omitted. This would establish the proportional frequency of this error in relation to the exact number of occasions for committing it. However, such a computation would have involved an enormously detailed analysis of every paper. It is our view that the expense such a detailed analysis would require could not possibly be justified: the errors actually are not as frequent as that. Instead, the kind of analysis we undertook merely assumes that the more students write, the more likely they are to find occasions for making errors -- surely a valid assumption!

Table 6.5

Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 12G

		Argument	Narrative	
			Personal	Invented
All Pronoun Errors	0	35.5	29.4	75.0
	1	41.9	52.9	16.7
	2+	22.7	17.6	8.3
All Errors Resulting From Distancing Problems	0	32.3	41.2	75.0
	1	35.5	41.2	8.3
	2+	32.2	17.6	16.7
All Adverbial Errors	0	83.9	88.2	91.7
	1	12.9	11.8	8.3
	2+	3.2	0	0
All Verb Errors	0	77.4	82.4	58.3
	1	19.4	11.8	25.0
	2+	3.2	5.9	16.6
All Other Incorrect Usages	0	64.5	64.7	41.1
	1	12.9	23.5	50.0
	2+	22.6	11.8	0

It is important to note that in all the tables that report proportional frequencies, the standard deviations are very high. This points to one of the most important characteristics of these data, which is that the mean values result from a small number of students whose work shows a fairly high incidence of some type of error combined with a much larger group of students whose papers contain at worst only one or two instances of the same type of error, and more commonly none. Thus, although we will talk about various developmental trends in the papers we analysed, we cannot stress too strongly that we are talking about the patterns determined by the small number of students with a fairly high proportional frequency of errors, and not the whole group of students in the sample.

Table 6.6

Percentage of Papers Containing Other Mechanical and Conventional Errors, by Mode - Grade 12A

		Argument	Narrative	
			Personal	Invented
All Pronoun Errors	0	47.2	74.1	78.9
	1	20.2	14.8	15.8
	2+	32.5	11.1	5.2
All Errors Resulting From Distancing Problems	0	51.7	59.3	65.8
	1	18.0	14.8	18.4
	2+	30.3	25.9	15.8
All Adverbial Errors	0	84.3	81.5	84.2
	1	13.5	11.1	13.2
	2+	2.2	7.4	2.6
All Verb Errors	0	79.8	74.1	71.1
	1	14.6	22.2	26.3
	2+	5.6	3.7	2.6
All Other Incorrect Usages	0	42.7	51.9	42.1
	1	25.8	25.9	47.4
	2+	31.5	22.2	10.6

Table 6.7

Proportional Frequency Per Sentence of Grouped Punctuation Errors, By Grade And Mode

	N		All	Argument	Narrative	
					Personal	Invented
Grade 5	203	M	.386	.384	.294	.441
		S.D.	.443	.424	.235	.590
Grade 8	176	M	.278	.26	.296	.293
		S.D.	.241	.229	.296	.227
Grade 12G	69	M	.232	.249	.213	.272
		S.D.	.220	.289	.124	.190
Grade 12A	164	M	.182	.199	.183	.151
		S.D.	.189	.192	.186	.185

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 sentences an average of 386 contained a punctuation error.

There is a steady decrease in proportional frequency from Grade 5 to Grade 12, with the performance of the Grade 12G students resembling that of Grade 8 students more than that of Grade 12A students. In Grades 5, 8, and 12G, punctuation errors are more frequent in narrative papers (particularly in invented narratives in the case of the Grade 5 and 12G students), but in Grade 12 they are slightly more frequent in transactional writing.

The relatively high standard deviations (S.D.) show that (except in Grade 12G narratives) the performance of individual students is not predictable: some do far better than the means suggest, others do far worse.

Table 6.7 shows the proportional frequency of grouped punctuation errors by grade and mode. Developmentally, the table reveals a decrease in the frequency of error from Grade 5 to Grade 12A, and, in view of the much greater length of the Grade 12A papers, it must be stressed that this proportional decrease represents a very significant improvement. The Grade 12G students, however, perform at a level closer to the Grade 8 students than to those in Grade 12A, and this pattern also holds for most of the following six tables. In Grades 5, 8, and 12G, punctuation errors are more frequent in narratives, and particularly in invented narratives, in the case of the Grade 5 and 12G students. In Grade 12A, however, they are most frequent in transactional writing.

This breakdown of the frequency of error by modes suggests fairly complex correlations between the writing task and this particular category of error. In general, the most obvious

conclusion is that frequency of punctuation errors correlates fairly directly with the length of the piece of writing attempted, especially when a limited period of time is allowed for both production and revision. The invented narrative, it will be remembered, is, of these three modes, the one in which students first achieve the ability to satisfy adult readers' expectations, and it remains the mode in which their writing is most fluent. It is usually their very fluency that betrays them, despite the knowledge most have of the rules of punctuation: their desire to get down all the details of the carefully elaborated stories so many of them produced simply did not leave them enough time to pay attention to the details of punctuation. The different pattern for the Grade 12A students shows that for them, however, this is no longer the case. They pay approximately equal attention to the expectation of correct punctuation in all three modes.

Table 6.8

Proportional Frequency Per Word of Grouped Spelling Errors, By Grade And Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.031	.033	.026	.031
	S.D.	.029	.031	.023	.022
Grade 8	M	.015	.015	.012	.017
	S.D.	.014	.014	.010	.011
Grade 12G	M	.015	.016	.011	.021
	S.D.	.013	.014	.011	.015
Grade 12A	M	.008	.007	.009	.007
	S.D.	.009	.008	.009	.012

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 words there was an average of 31 spelling errors.

There is a decrease in proportional frequency from Grade 5 to Grade 12, with the performance of the Grade 12G students resembling that of Grade 8 students more than that of Grade 12A students. In Grade 5, spelling errors are more frequent in transactional writing, whereas in Grade 8 and Grade 12G they are most frequent in invented narratives. The differences by mode are not significant in the Grade 12A papers.

The relatively high standard deviations (S.D.) show that the performance of individual students is not predictable: some do far better than the means suggest, others do far worse.

The pattern of the proportional frequency of spelling errors (table 6.8) is similar. In particular, Grade 8 and Grade 12G students show the highest proportional frequency of error in

invented narrative. Again, then, one could conclude that their fluency has trapped them into paying less attention to spelling in that mode than they do in the other two, where the shorter length of the tasks they set themselves left them more time to check and correct spellings. However, the Grade 5 results, with the highest mean but also the highest standard deviation for the arguments, show that for some proportion of the Grade 5 students the much higher cognitive difficulty of the transactional task (including, undoubtedly, a more mature and more abstract vocabulary) produced a high frequency of spelling errors.

Table 6.9

Proportional Frequency per Sentence of Pronoun Errors, by Grade and Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.055	.081	.042	.021
	S.D.	.105	.129	.085	.042
Grade 8	M	.049	.073	.037	.021
	S.D.	.087	.109	.064	.033
Grade 12G	M	.058	.084	.031	.015
	S.D.	.093	.109	.023	.031
Grade 12A	M	.040	.059	.013	.007
	S.D.	.072	.083	.024	.015

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 sentences there was an average of 55 errors in pronoun usage.

There is little difference in the performance of the Grade 5, 8, and 12G students. The Grade 12A students' performance is significantly better. At all levels, pronoun errors are most frequent in transactional writing.

The very high standard deviations (S.D.) point to enormous variance in these results; the means result from a very weak performance by a small proportion of the students at each level in each mode.

Table 6.10
Proportional Frequency per t-Unit of Errors Resulting from Distance Problems, by Grade and Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.039	.056	.019	.020
	S.D.	.072	.089	.041	.043
Grade 8	M	.050	.069	.037	.031
	S.D.	.094	.114	.056	.079
Grade 12G	M	.070	.105	.025	.020
	S.D.	.113	.133	.024	.042
Grade 12A	M	.036	.048	.027	.004
	S.D.	.061	.075	.039	.011

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 t-units there were 39 errors due to distancing problems.

On the whole, performance in this area gets steadily worse from Grade 5 to Grade 12G. The Grade 12A students recover to approximately the same level of competence as the Grade 5 students. At all levels, errors of this kind are far more frequent in transactional writing than in any other kind.

The very high standard deviations (S.D.) point to enormous variance in these results; the means result from a very weak performance by a small proportion of the students at each level and in each mode.

It is not in punctuation and spelling errors that the importance of this phenomenon is most clear, however, but rather in the analyses of pronoun errors, distancing errors, adverbial and verbal errors, and shibboleths (tables 6.9 - 6.13). With the partial exception of errors in verb usage (table 6.12), all these errors are far more frequent in transactional writing than in either of the two narrative modes. In addition, pronoun and distancing errors increase in proportional frequency from Grade 5 to Grade 12G, with significantly better performance from the Grade 12A students. In these errors the correlation with the cognitive demands of the task is clear. As we have seen, the developmental gains in the ability to handle argumentation are very striking between Grade 5 and Grade 12. The ability of student writers to sort out to whom they want their pronouns to refer, to maintain this reference clearly and consistently, and to maintain a consistent stance with respect to the topics of their arguments by no means keeps up with the growing complexity of their transactional

Table 6.11

Proportional Frequency per t-Unit of Errors in Adverbial Usage, by Grade and Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.006	.008	.005	.000
	S.D.	.024	.030	.015	.000
Grade 8	M	.007	.009	.006	.002
	S.D.	.028	.031	.018	.010
Grade 12G	M	.006	.011	.003	.002
	S.D.	.020	.028	.009	.008
Grade 12A	M	.008	.010	.008	.004
	S.D.	.023	.027	.021	.011

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 t-units there were on the average 6 errors in adverbial usage.

There are no significant differences by grade in this area: Grade 12A students perform at approximately the same level of competence as Grade 5 students. At all levels, errors in adverbial usage are most frequent in transactional writing.

The very high standard deviations (S.D.) point to enormous variance in these results; the means result from a weak performance by a small proportion of the students at each level and in each mode.

writing. At the Grade 12 level, in fact, it is clearly only better students, those in "A" streams, who are able both to handle complex argumentation and to respond to the demand for correctness. Compared to the Grade 5 and Grade 8 students, the Grade 12G students frequently fall into the traps that this kind of writing sets. The complexity of what they want to say repeatedly gets the better of their ability to apply appropriate rules, although the pattern in other modes shows that they do know the rules. Although the details of the pattern are slightly different, in general the analysis of adverbial errors (table 6.11) points to the same conclusion. The frequency of these errors also correlates with the cognitive difficulty of the task.

The analysis of errors in verb usage shows a different phenomenon (table 6.12). Again errors are most frequent in Grade 5 transactional writing, suggesting the greater cognitive difficulty of that task at that level; again differences by mode at the Grade 12A level are insignificant, showing again that by Grade 12 the more able students are sufficiently in

Table 6.12

Proportional Frequency per t-Unit of Errors in Verb Usage, by Grade and Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.021	.031	.015	.010
	S.D.	.087	.119	.034	.024
Grade 8	M	.016	.013	.022	.016
	S.D.	.030	.029	.035	.029
Grade 12G	M	.017	.015	.019	.019
	S.D.	.042	.037	.060	.039
Grade 12A	M	.010	.010	.009	.008
	S.D.	.022	.024	.018	.015

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 t-units there were an average of 21 containing errors in verb usage.

There is a decrease in the proportional frequency of these errors from Grade 5 to Grade 12A, with the Grade 12G students performing at about the same level as the Grade 8 students. In both Grade 8 and Grade 12G, errors in verb usage are most frequent in personal narratives, but in Grade 5 and (insignificantly) Grade 12A they are most frequent in transactional writing.

Again, extremely high standard deviations (S.D.) point to the enormous variance in these results.

command of mechanics and conventions for the different demands of the three modes to have no effect. However, among the Grade 8 and Grade 12G papers, non-standard verb forms and other errors in verb usage are most frequent in narratives, and particularly in personal narratives. This difference is almost certainly a consequence of socio-economic factors, with Grade 12G students, especially, likely to choose to represent in their narratives substandard forms familiar in everyday speech in their homes and among their peers. It may be noted that the frequency of errors in personal narratives among the Grade 5 papers is not much lower than that in Grades 8 and 12G. If the much higher frequency in Grade 5 arguments is a result, as we have already mentioned, of cognitive overload, in the less stressful personal narrative mode Grade 5 students are about as likely as Grade 8 and Grade 12G students to use substandard verb forms. On the other hand, the much lower frequency in the Grade 12A narratives, while perhaps a result in part of the improved editing techniques of some Grade 12A students, is surely the result chiefly of the correlation between social class and academic ability that the streaming into "G" and "A" levels in the secondary system naturally reveals.

Table 6.13

Proportional Frequency per t-Unit of Violated Shibboleths, by Grade and Mode

		All	Argument	Narrative	
				Personal	Invented
Grade 5	M	.031	.051	.015	.012
	S.D.	.078	.103	.033	.036
Grade 8	M	.025	.032	.029	.009
	S.D.	.060	.077	.051	.021
Grade 12G	M	.031	.035	.022	.023
	S.D.	.048	.054	.036	.021
Grade 12A	M	.038	.047	.025	.021
	S.D.	.050	.050	.034	.023

Comment

The mean figure (M) in the "All" column for Grade 5 shows that, in the Grade 5 papers considered as a group, in every 1000 t-units there was an average of 31 containing violations of shibboleths.

Although there is not much difference by grade in the frequency of such errors when all the papers at each level are considered together, there are tantalizing differences by mode, with transactional writing accounting for nearly all the errors at the Grade 5 level and the largest proportion of them at Grade 12A, whereas at Grade 8 and Grade 12G the proportional frequency in personal narratives is rather like that in arguments.

Again, extremely high standard deviations (S.D.) point to the enormous variance in these results.

What, then, are we to make of table 6.13 (frequency per t-unit of violated shibboleths), in which, for the first time, the frequency of error is higher in the Grade 12A papers than the Grade 12G papers, and indeed higher in each mode at the Grade 12A level than in almost every other cell in the same mode? The answer, paradoxically, is that the frequency of such errors is a clear sign of how much more fully the Grade 12A students have internalized the norms of literary discourse as compared to other students. For example, it is only when one wishes to focus some element by the use of only that the question of the placement of only becomes problematic. Only students who frequently want to begin sentences with non-finite participial modifiers in apposition to some element in the main clause can create misplaced modifiers with some frequency. Students who are not tempted to premodify non-finite verbs do not split infinitives. The greater frequency of such errors in the Grade 12A papers shows that these students have not yet achieved the complete assurance that professional writers sometimes have in these matters (or seem to have because of the work of professional editors).

But the frequency of error shows that the amount of elaboration and qualification that the Grade 12A students use (and these features are part of what gives their writing its greater richness and maturity) is making it possible for them to commit errors that less able writers have no occasion to commit. The Grade 12A students are closer to a genuinely literary level of discourse than any of the other groups of students.

PATTERNS OF ERRORS

Anyone who reads large numbers of student papers becomes aware that, at all levels, students tend to produce errors according to one of four patterns. At one extreme there are those whose work is virtually error-free, and at the other those whose work has a relatively high frequency of all sorts of errors. In between these two extremes there are two different ways in which student writers may produce a moderate frequency of error. Some have strongly preferred errors or classes of errors which they commit repeatedly. Others make occasional errors in a wide range of error types.

As we have already seen, certain types of errors apparently increase in proportion to the cognitive difficulty of the writing task; others are more or less constant developmentally but correlate with social class; others decrease developmentally. However, it has sometimes been suggested that students who have been made sensitive to the frequency of errors in their writing but have not developed successful strategies to avoid them will adopt another strategy -- essentially a strategy of taking as few risks as possible. In order to assess the importance of this possibility in this group of papers, we drew a further subsample by grade and mode. Initially this was a 10 per cent random subsample; however, if the number of papers drawn in any of the twelve cells (four grades x three modes) was fewer than twenty, a second 10 per cent subsample was drawn, and so on until either there were at least twenty papers in each cell or (in the case of Grade 12G) all eligible papers had been selected. The actual numbers of papers drawn by this procedure are shown in table 6.14.

Table 6.14
Patterns of Error Subsample: N's

	Transactional	Narrative	
		Personal	Invented
Grade 5	32	21	20
Grade 8	28	26	31
Grade 12G	32	7	13
Grade 12A	21	26	20

We then sorted this sample into four categories according to the pattern of error: those with a low frequency of errors and a narrow range of error types (or, generally, a high level of mechanical and conventional assurance), those with a low frequency of errors in a relatively wide range of error types (i.e., a pattern of occasional, random errors), those with a relatively high frequency of errors in a narrow range of error types (the "favourite error" pattern), and those with a high frequency of errors in a wide range of error types (those with apparently poor mechanical and conventional control).

The results of this sorting are shown in table 6.15. No analysis of these results on the basis of the percentage of papers in each mode at each level revealed any pattern. What is revealing, however, is a computation without reference to mode of the breakdown in each grade. This computation is presented in table 6.16. Although it is not always the case, generally speaking errors in papers having one of the first two patterns are more likely to be momentary lapses by students whose writing elsewhere suggests that they know the relevant rule. These can be regarded for the most part as errors resulting simply from carelessness, which would have been corrected automatically if the students had had more efficient editing techniques. The papers in the third group, however, suggest a more pathological kind of behaviour, as though these students have actually got a few rules wrong or have internalized wrong forms (in the way that some adults, for example, surprise themselves by writing no for know). Such errors also should be caught at the editing stage, of course; however, they may need a different editing technique. Finally, those in the last category suggest the most pathological kinds of behaviour. A number of students in this category have at best a somewhat shaky command of the principles underlying English spelling and punctuation rules and frequently make the wrong choice when they are faced with a grammatical problem.

What is striking in table 6.16 is that the differences in the proportion of papers in the first two categories combined, as compared to the proportions in the second two categories combined, changes only very slightly from one grade to the next and not according to any clear developmental trend. The proportion of Grade 12A papers falling into the third and fourth categories is almost exactly the same as the proportion at the Grade 5 level. Moreover, the proportion of students at the Grade 8 and 12G levels who fall into the third and fourth categories is actually lower than at the Grade 5 and 12A levels.

It is important to stress that other things are not equal in the four groups of students. The actual sources of error are different, as we have already seen. In addition, the occasions for error change over time; in particular, the Grade 12A students set themselves tasks so much more difficult than those undertaken by students in the other groups that they have to deal with categories of error and occasions for error that are hardly at issue with the other groups.

Table 6.15

Number of Papers in Each Error Pattern, By Grade and Mode

	Grade 5 (N=72)			Grade 8 (N=85)			Grade12G (N=52)			Grade 12A (N=67)		
	Trans	Narr		Trans	Narr		Trans	Narr		Trans	Narr	
		Inv	Pers		Inv	Pers		Inv	Pers		Inv	Pers
Few errors: low range and low frequency	7	3	2	11	4	8	8	1	3	8	6	8
Some errors: wide range but low frequency	13	8	6	5	11	15	8	6	5	3	5	6
Some errors: narrow range but high frequency	3	4	7	7	10	6	9	0	5	4	12	6
Many errors: wide range and high frequency	9	6	4	5	1	2	7	0	0	6	3	0

Table 6.16

Proportion of Papers by Error Pattern in Each Grade (per cent)

	Grade 5 N = 72	Grade 8 N = 85	Grade 12G N = 52	Grade 12A N = 67
a Narrow range, low frequency	16.67	27.06	23.08	32.84
b_i Wide range, low frequency	37.50	36.47	36.54	20.90
(sum of a and b_i)	(54.17)	(63.53)	(59.62)	(53.74)
b_{ii} Narrow range, high frequency	19.44	27.06	26.92	32.84
c Wide range, high frequency	28.39	9.41	13.46	13.43
(sum of b_{ii} and c)	(47.83)	(36.47)	(40.38)	(46.27)

However, if we take these differences into account and remember that the older students are writing much longer papers and responding to more complex demands, then we can say that, at the broadest level, the proportion of students exemplifying each pattern of error scarcely changes over time. About the same proportion of students at the Grade 5 level as at the Grade 12A level shows a reasonable level of mastery of mechanics and conventions, about equally marred in each case by about the same level of sheer carelessness. And, despite the enormous amount of teaching addressed specifically to mechanics and conventions between Grade 5 and Grade 12, there seems to be about the same proportion of students in Grade 12A as in Grade 5 that has still not acquired certain fundamental mechanical and conventional skills.

That being the case, we may ask if there is any particular reason why the Grade 8 and the Grade 12G students actually seem to perform better in this respect than the Grade 5 and Grade 12A students. In truth, of course, the answer is complex. But one part of it is indeed that Grade 8 and Grade 12G students are somewhat more likely than students in the other two classes to use a strategy of avoiding situations that put them at risk. Sample Essays 21 and 22, both of them Grade 8 transactional pieces, illustrate two extremes.

Sample Essay 21 is an essay that mechanically is almost perfect: it is marred by one phonetic spelling error (corrected in the next line), one comma splice, and a non-standard (though by no means uncommon) spelling of TV as tv without periods. The essay is neatly written in a large, clear hand. It is also a mere seven sentences long, and many of those sentences constitute a paragraph: everything the writer was willing to say on a particular topic could be stated in paragraphs having a mean length of about fifteen words. It is only in its mechanics that the paper has any merit at all.

Without being in any sense pathological, Sample Essay 22 comes close to the other extreme. It has a fairly high number of simple mechanical errors in spelling and punctuation. It contains, as well, a number of errors of a more advanced type -- using a non-standard idiom in place of "on one basis", for example, and falling into the trap of attraction to commit an error in verb-subject agreement. In addition, the paper is written in a smaller and much less tidy hand than that of Sample Essay 21. But the difference in the calibre of this second paper is immediately apparent.

Although these two samples are somewhat extreme, they do point to a tendency that proved to be present in all grades when the papers were sorted on this basis. Rereading a selection of the papers categorized as having very few errors showed that they were, on the whole, the least interesting set. Rereading those characterized by a high frequency of errors of some or of many types showed that some of the best papers fall into this category, despite the messy surface they present.

Sample Essay 21 (Grade 8)

In my point of view I think there should be more interesting novels written for people of all ages. The novels should be reaveling something interesting to the public, exciting and thrilling aspects of life should be revealed.

The horrible aspects of life should also be revealed, for example the killings in El Salvador.

School aged children should also know about world's problems through books.

Good books should also be published for reading entertainment instead of watching soaps on tv all the time.

Books are also used for learning things such as shorthand, sewing and others.

Sample Essay 22 (Grade 8)

As you probably already know there are many things that all students and definitely also teachers abject to in todays school system.

Some of the things I really abject to are:

1) First of all, when teachers ask: "Will you please hand in your notebook "and then diligently all of us have to hand in our wonderful piece of paper (with either dogears or edges torn off) to the teacher. Then she decides to have some "fun" by mixing the papers up and then handing them out to other people in the class for them to mark. What I don't like about that arrangement is that what happens if your sheet gets marked by someone you hate? We had to do that once (I had a perfect story with all the adjectives you could think of) and do you know what the pest wrote on my sheet was Well he had the nerve to put down a "B-" and "You didn't Write this." I thought that was an insut. I was so fuming mad I could have broken his neck, however, I spared the pleasure for later. I think that only teachers should mark compositions.

2) Another hazard for students are Sciense teachers that only mark under one basis - if there isnt a working model on a project or if there isn't anything new to show give it a bad mark. It took

DISCUSSION

It is important that the frequency of mechanical and conventional errors in these papers not be overstressed. The number and range of errors identified in the analysis were both very high, and the analysis was very rigorous. Having seen in recent years many papers that had already been marked by teachers, we are fairly confident that we identified errors that many demanding teachers would have ignored.

In addition, it is important to note that the standard against which these students are being measured is an absolute standard, and thus one that is scarcely to be found in the real world. It is easy for journalists, trustees, and irate parents to berate schools for allowing students to proceed and to graduate when their writing is not mechanically perfect. But most adults have quite a high tolerance for a certain amount of mechanical imperfection in their own writing and in what they read. For one thing, many fluent adults, like some of these students, have favourite spelling errors. One of the authors of this report, when drafting material long-hand, has a very strong tendency to write no in place of know, and his exceptionally competent secretary often shortens too to to (although she can type Arabic and Inuktitut without making any mistakes at all). Moreover, much of what we read contains examples of precisely the same kind of errors the students make. A headline in the Ottawa Citizen for March 18, 1984, announced that a certain politician had arrived in Ottawa with "all the trappings of royality" (p. 40). An article by Lawrence O'Toole printed on page E6 of the entertainment section of the national edition of the Globe and Mail on March 17, 1984, contains a faulty parallelism ("Lambert .... is merely a young, lanky, cigaret-smoking fellow with a French accent and sporting faded blue jeans and a big grin") and also bungles the punctuation of two sentences ("He moved on to Paris where he was accepted as a theatre student at the Conservatoire; having studied Moliere and Racine. He emerged from the course, found three small roles in forgotten French films and ... was auditioning for Hudson."). An important document recently published by the Ontario Ministry of Education (McLean, 1982) contains (p. 8) a word-division error far more serious than any we have seen in any piece of student writing, in that the end of one line and the beginning of the next read as follows:

> ...a nation-wide survey of nine-, thirteen-
> , and seventeen-year-olds.

On page 12 of the same document the subheading for an illustration reads:

> Fig. 2 Reading instrument "Look Who's Stealing Your Electricity" and field trial results. "P values are percent correct.

A much quoted and reproduced article in Indirections, the journal of the Ontario Council of Teachers of English, not only contains an example of the use of their agreeing with the antecedent everybody, which was actually a conscious choice on the part of the authors; it also contains the structure "the frequency of what are called errors in student writing are

... widely taken as evidence that the schools are not doing their job properly" -- an error that was not intentional, but escaped the notice of both the authors of the article and the editor of the journal (Pringle and Freedman 1982, 34).

In the light of such levels of performance on the part of responsible adults who have had the benefit of professional editors, the expectation of perfect performance from students can be seen to be both unrealistic and unfair. Rather, what the analysis of errors reveals is two points that particularly need to be stressed. The first is that the patterns of error in student writing correlate in extremely complicated ways with other facets of the writing task. Before the seriousness of a particular error can be judged, it is necessary to take into account the nature of the task as set and also as interpreted by the student, the developmental level of the student, the extent to which the task threatens to overwhelm the cognitive powers of the student at that level, the effect on all these variables of the time constraints placed on the task, and of course the extent to which the student's socio-economic background is likely to encourage the production of non-standard forms.

The second point is the lack of overall improvement in many kinds of errors between Grade 5 and Grade 12, despite all the teaching directed to errors over the intervening six years. It is clearly the case that either this teaching, or else the effect of maturation, does bring about some changes. But whatever the cause of those changes that can be discerned, they are remarkably few compared to the amount of instruction devoted to bringing them about. If, as we believe, these results reflect on the whole a pedagogy of English that continues to teach about errors in order that students may avoid them, then we would claim that a great deal of time has been put to no good use. And, in fact, the analysis of patterns of error suggests a still stronger claim. There appear to be good grounds for saying that one effect of a pedagogy that concentrates on error is to encourage some students to limit their task very severely precisely in order to avoid errors that they have no other strategy for avoiding. The result is papers that are relatively good in their mechanics and control of conventions but have no other merits whatsoever.

To say this, however, is not to claim that no improvement is possible after Grade 5, just as pointing out that many errors appear in printed professional writing does not mean that students should not be expected to assume responsibility for ridding their essays of as many errors as possible. We have stressed that the mean values we have discussed in this chapter are the result of the performance of a relatively small number of students in each group. We began, however, by noting that most students have at least two simple spelling errors and two simple punctuation errors in their papers, and many show even more than that. If an error-oriented pedagogy has failed to improve this situation after six or seven years (the random occurrence of many errors shows that most students actually do know the relevant rules but simply fail to apply them), then the solution to the problem must lie in providing students with more effective techniques for revising and editing what they write. It is to these topics that we turn next.

7 Revision Analysis

As the description of this project's design in chapter 1 reveals, special provisions were made to allow all students enough time away from and with their texts to revise at least once. Students were given two separate periods on different days for their composing. On the first day, teachers announced that students were to write the first draft of their composition that day. They also explained that this draft would be collected at the end of the period and that some time later the draft would be returned to allow them to revise and prepare a final copy. We tried thus to ensure that students would have enough time away from their first drafts to be able to look at their texts with fresh eyes; in addition, we wanted the students to know that their first attempt was to be a rough draft so that they would feel free to explore and write freely the first time around. The notion was that, if students had developed useful revision strategies in the past, such a time apportionment, although not ideal, would at least allow them to bring some of these strategies into play.

METHOD OF ANALYSIS

In order to analyse and compare the revisions performed by the students, a 10 per cent subsample of the papers was selected randomly for a total of 265 papers. Each paper was rated according to our revision instrument. This categorizes the types of changes made according to the kind of operation involved and the locus or level of the change. The total number of revision operations possible are four: adding, deleting, substituting, and reordering. These operations may take place at the following levels: word, phrase, sentence, idea unit (to consist of two or more sentences), section (a notion akin to the conceptual paragraph), and whole draft. For each paper we counted the number of instances of each kind of operation at each level. (Table 7.1 specifies the categories.)

Such an analysis is not easy to perform technically, for the problems involved in comparing two drafts visually are great. Our particular solution was to have the research assistant tape-record the first draft and listen to this recording as she went over the second draft word by word. Changes that were made directly onto the first draft were categorized separately and later added to the first-to-second draft changes to arrive at the final total.

In addition, a prose commentary written by the research assistant accompanied each piece, describing the nature of the revisions. For example, some word-level substitutions involved replacement by synonyms, while others involved a change in meaning. Some additions involved only a change from contractions to the long form, while others involved an elaboration of

texture. Some large-scale changes involved a real reshaping of the argument, others involved only a deletion of illustrative material. In other words, the prose commentary fleshed out, specified, and elaborated on the numerical analysis.

FINDINGS

The tables on the accompanying pages summarize the findings. Table 7.1 presents the percentage of papers at each grade level showing no instances of each particular change. Table 7.2 indicates the mean, standard deviation, and range for each category of revision at each grade level. The following points are immediately apparent. First, the most striking feature is how little revising is being done, in general, at all levels. Table 7.1 shows that for most categories, a majority of the papers at all grade levels exhibited no instances at all. Table 7.2 shows means of much less than one instance per paper for almost all categories. Further, these figures are, if anything, artificially high because of our method of selecting the sample. Our procedure was to choose every tenth argument where there were two drafts submitted. Where only a final copy had been submitted, the research assistant selected the next paper that had two drafts. In other words, we excluded from our calculations a large number of papers that had no changes at all. Our justification was that these students had not been given the opportunity to revise and should not be measured in the same way as the others. Obviously, the figures for the whole population would be significantly lower than the already low numbers reported in our tables had we chosen to include the one-draft essays.

The second point to note about table 7.2 is that in almost every subcategory (except in those where there are hardly any instances of the phenomenon), the standard deviation is greater than the mean and the range is five or six times the mean. What this indicates is that there is very great variation in the sample between individual papers at each grade level. Such an impression is borne out by the prose commentaries and is accounted for, in part, in our specific discussion on the Grade 8 papers.

Third, there is a pronounced tendency at each level for the number of revisions to decrease as one moves from the micro- to the macro-level: there are far more changes at the word than at the phrase level, at the phrase than at the sentence level, and so on. On the one hand, this is to be expected, since there are more words than phrases or sentences. Given, however, that the total number of changes at the micro-level is so few, that at most we are talking about four changes at the word level in some categories in Grade 12, and more commonly only one or two changes at the word level, the radical decrease from the micro- to the macro-level is telling. The real point, however, as both tables 7.1 and 7.2 reveal, is that for most of the specific operations there are almost no changes, on average, beyond the phrase level in Grade 5 papers, and almost no changes beyond the sentence level in Grades 8 and 12G.

Table 7.1

Revisions: Percentage of Papers with No Instance of Each Category

Category	Grade 5	Grade 8	Grade 12G	Grade 12A
Add Word	36.4	28.4	28.3	16.2
Add Phrase	66.2	44.8	43.4	38.2
Add Sentence	84.4	65.7	58.5	58.8
Add Idea Unit	97.4	94.0	86.8	76.5
Add Section	100.0	100.0	100.0	98.5
Delete Word	37.7	32.8	39.6	25.0
Delete Phrase	79.2	67.2	69.8	51.5
Delete Sentence	77.9	71.6	75.5	67.5
Delete Idea Unit	93.5	92.5	96.2	89.7
Delete Section	98.7	98.5	100.0	100.0
Substitute Word	23.4	19.4	13.2	8.8
Substitute Phrase	63.6	38.8	37.7	22.1
Substitute Sentence	62.3	49.3	47.2	35.3
Substitute Idea Unit	98.7	79.1	88.7	75.0
Reorder Word	83.1	79.1	79.2	66.2
Reorder Phrase	89.6	82.1	75.5	82.4
Reorder Sentence	96.1	85.1	96.2	80.9
Reorder Idea Unit	100.0	94.0	98.1	91.2
Reorder Section	100.0	100.0	98.1	100.0
Reorder Draft	100.0	100.0	98.1	100.0

Table 7.2

Instances of Revisions per Paper, by Level

	Grade 5			Grade 8			Grade 12G			Grade 12A		
Category	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range
ADDITIONS												
Word	1.506	1.752	8.0	2.687	3.026	12.0	2.264	2.387	11.0	3.735	3.606	13.0
Phrase	0.532	0.882	3.0	1.209	1.543	8.0	1.151	1.433	6.0	1.618	1.728	7.0
Sentence	0.208	0.522	2.0	0.627	1.099	5.0	0.660	0.960	4.0	0.691	1.011	4.0
Idea Unit	0.026	0.160	1.0	0.060	0.239	1.0	0.189	0.521	2.0	0.353	0.824	5.0
Section	0	0	0	0	0	0	0	0	0	0.015	0.121	1.0
Deletions												
Word	1.623	2.115	8.0	2.149	2.401	11.0	1.887	2.259	9.0	2.868	2.812	12.0
Phrase	0.351	0.774	3.0	0.493	0.859	4.0	0.434	0.866	5.0	0.897	1.271	6.0
Sentence	0.338	1.008	8.0	0.522	1.005	5.0	0.415	0.819	3.0	0.765	1.477	8.0
Idea Unit	0.078	0.315	2.0	0.075	0.265	1.0	0.057	0.305	2.0	0.118	0.368	2.0
Section	0.013	0.114	1.0	0.015	0.122	1.0	0	0	0	0	0	0
Substitutions												
Word	2.429	3.088	19.0	3.179	2.974	11.0	4.981	4.343	20.0	4.853	3.767	13.0
Phrase	0.753	1.194	5.0	1.313	1.479	6.0	1.453	1.866	7.0	2.618	2.539	11.0
Sentence	0.623	1.089	7.0	1.149	1.635	7.0	1.266	1.857	9.0	1.985	2.378	9.0
Idea Unit	0.013	0.114	1.0	0.299	0.697	4.0	0.113	0.320	1.0	0.368	0.710	3.0
Section	0	0	0	0	0	0	0	0	0	0	0	0
Reorderings												
Word	0.260	0.677	4.0	0.328	0.726	3.0	0.264	0.560	2.0	0.603	1.024	4.0
Phrase	0.169	0.571	3.0	0.224	0.517	2.0	0.264	0.486	2.0	0.206	0.475	2.0
Sentence	0.052	0.276	2.0	0.164	0.412	2.0	0.038	0.192	1.0	0.368	1.208	9.0
Idea Unit	0	0	0	0.090	0.417	3.0	0.019	0.137	1.0	0.147	0.526	3.0
Section	0	0	0	0	0	0	0	0	0	0	0	0

Fourth, there is a difference in the kinds of operations preferred. At all levels the students prefer to substitute and then to add or delete; reordering is far behind. The picture that emerges is of a population of students whose concept of revision seems to be one of substitution at the word level. To a large extent, such changes involve the use of synonyms either to avoid repetition or to substitute a "better" word. Nancy Sommers (1979), who described similar findings several years ago in a study contrasting inexperienced student writers with professional writers, calls this a "thesaurus conception" of the writing process. Her point is that while experienced writers "re-see" their text in its totality, look at its overall structure, and try to elaborate or redefine the line of its argument, inexperienced writers typically focus only on the surface features, making cosmetic changes at best.

The accompanying Grade 8 essay on inflation reveals the kinds of changes that were being made (Sample Essay 23). The first draft is the text on the right of the page, and the changes are indicated on the left. The changes are mainly substitutions or deletions at the micro-level, apparently aimed at making the prose sound less informal (the deletion of "mostly" and the substitution of "by the time") and perhaps more precise (substitutions of "chains" and "$200"). The revisions are few and superficial; they do not affect the meaning, the structure, or even the tone of the piece.

Sample Essay 23 (Grade 8)

Revisions	Essay
	Inflation is killing us, right now gas is expensive enough, but by the time I get up there it would be $200 to fill a tank. I don't get a big enough allowance either.
Substitute when for by the time Substitute $100 for $200	
Delete a big	
	Some one should do something about the rising price of food, gas, etc, or raise our parents pay.
	Cars and other motor vehicles are expensive and they keep going up. The food is too expensive and Mr. Trudeau doesn't do anything about it, he has to pay also, doesn't he worry about it.
	Everyone is trying to fight inflation. But they aren't doing very good. Fast food chains are going out of business also. But what I'm mostly worried about is what will it be like when I grow up?
Substitute but for . But	
Substitute restaurants for chains Delete mostly	

A fifth point to note about our findings is the developmental tendency. For nearly every subcategory (again except for those where there are almost no instances at any level, such as the section level for all operations), there seems to be an increase in the means by grade as well as a decrease in the number of papers exhibiting no instance. That is, there is an increase from Grade 5 to Grade 8 to Grade 12A; the Grade 12G students, on the whole, are similar to the Grade 8s. The chi-square test on a cross-tabulation by grade showed the differences to be significant for word (because everyone makes some changes at the word level).

This tendency may be the result of a number of factors. Some might argue that the ability to revise only comes with maturity; however, the research done by Donald Graves (1983) in New Hampshire with children in Grades 1 to 4 gives the lie to any such claim. Clearly, very young children can revise to great effect, using all the operations specified in our instrument, if they are given the appropriate opportunity and models.

A second possible explanation relates to pedagogy: perhaps students are increasingly taught, or expected, to revise in the upper years. Certainly the fact that they have been in school longer makes it more likely that they have met some teacher who will require revision.

A third possible explanation for the developmental trends in our data is that more mature students have read more and consequently have more highly developed internal models against which to measure their own attempts. For revising implies, among another things, an evaluation of one's own text in terms of both what one intended to say and the conventional model for the genre selected. More reading in that genre will define more precisely its form.

In addition, more mature students will have developed a more finely calibrated sense of teacher expectations. They will have had more opportunity to learn what this particular audience rewards. And an important question in all revising is "How will my audience view what I have written?"

We do not know which of these explanations is the most likely. What we do know is that, whatever the reason, there is more revising at the upper levels but that such revising still does not amount to a whole lot. When all is said and done, over 50 per cent of the Grade 12A students do not make additions or deletions beyond the phrase level, and the same percentage do no reordering at all. Our prose analyses show very few instances of whole-text awareness, of any real re-seeing -- revision in its root sense. And, as the discussions in chapter 2 suggest, many (if not most) of these texts required such activity.

GRADE 8 REVISION ANALYSIS

As noted above, for each year and each type of revision the standard deviation was significantly higher than the mean, and the range was five or six times the mean, indicating a great variation among individual papers. During the original analysis, where the papers had been grouped by school and class, we noticed that certain sequences of papers seemed to stand out from the rest. We wondered, consequently, whether there might be a class or school effect on revision strategies that would explain some of the variation.

Since the original sample involved only 10 percent of the total population, nothing conclusive could be said on the basis of that data. For this reason, we chose to perform a second analysis, drawing a much larger sample (33 1/3 percent) from one specific grade level. Grade 8 was chosen by elimination: at the Grade 5 level, there were too few changes in general to make any useful comparisons; at the Grade 12 level, there had been enough intervening years of education that any strategies evinced at that stage might have been taught at any of the Intermediate or Senior years, and consequently, revising patterns by class were not as likely to be discerned.

One-third of all the grade arguments were submitted to the same kind of revision analysis as was described above. The first point to note is that one-third of all the classes in this population sent in only one draft -- the final copy. These were not included in the sample for analysis. However, given that we are interested in discussing pedagogical practices, these papers do make a statement. The instructions to the teachers were very explicit: the procedure for eliciting the various drafts was described day by day. Despite this, a large percentage of the teachers sent in only one draft. We can only assume that the students wrote only one draft, either because the teachers wished to sabotage the project (and we have no evidence from any other source to suggest this to be the case; on the contrary, the teachers we met with were most cordial and co-operative), or because this seemed such an unusual, even abnormal, exercise that the teachers simply chose to omit that part of the procedure. For the latter conclusion, we do have independent confirmation in the form of discussions with many teachers and students who suggest that typical classroom composing behaviour is to write a single draft which is the final draft.

As to the papers that included two drafts, both the statistical and prose analyses suggest the following division by class: In one large group of classes there was significant variation within each class (with individual students revising extensively and the majority minimally), but no pattern differentiating specific classes. Comparatively, this group made fewer changes on average than the second group. In the second group the classes were derived from three schools where students revised radically. Table 7.3 compares the means for the revision categories (grouped by level and operation) of these three schools with those of the first large group of classes.

At this point, we would point out that our intention was to discriminate by class; however, this was not always possible. Some of the papers were sent in to us by school rather than by class; where only one class from that school at that grade level had been assigned an argument, this posed no problem. In other cases, however, we have had to treat the school as a unit, although we know that the unit in fact consisted of two or three classes and although a casual reading of the papers, in the sequence in which they were received, suggests a quite marked division by class. For example, to refer to table 7.3, it was our impression that only one class in School 69 (where two classes were included) showed a radical difference in the revision strategies used. Thus, if anything, the means for these schools are somewhat depressed by the necessary inclusion of classes that are more typical of the first group.

Aside from the statistical differences, even the appearance of the first drafts of the students' papers in the second group signalled their difference. These were the only students whose first drafts were heavily marked. In all the rest of the sample (except for the rare individual), both drafts were clean; whatever changes were made appeared only in the copying, with few (if any) indications on the text.

In contrast, considered the accompanying copy of a typical paper from one of the classes pinpointed above (Sample Essay 24). The draft is heavily scored, with deletions of passages as well as words, with substitutions marked above and beside sentences and idea units, and with arrows indicating insertions and reorderings. This student, like others in these classes, is clearly wrestling with the text -- reshaping, remoulding, and remodelling radically -- not only to refine language but also to alter basic structure, to expand and modify meaning. These students have learned the techniques whereby revision is made easier (the slashing, arrows, carets, and asterisks) and consequently can see their first drafts as plastic and malleable.

An example of the kind of revision that suggests a real re-seeing and that cannot be captured by our statistical analyses is the accompanying essay (Sample Essay 25) on aid to underdeveloped countries. What the student did in his first draft was typical of many papers in our sample at all grade levels. He began to make one point but, in the course of the argument, what was an incidental point became the focus. Many students wrote in their first drafts what Linda Flower (1979) has called "writer-based" prose -- in effect, explorations of their ideas on this and related topics. The organizational patterns resembled the stream-of-consciousness associations of a mind thinking.

What is untypical in the accompanying paper is the second draft. Most other students in their second drafts simply made minor cosmetic changes to their explorations and called the result their final copy. This writer re-saw the whole text in the revision, condensing the long digression of the first draft into a single comment and developing the original thesis into a fully elaborated and newly developed piece.

Table 7.3

A Comparison of Means at the Grade 8 Level

Category	Group One N=86	School 48 N=9	School 64 N=28	School 69 N=18
All changes at Word Level	4.17	4.78	7.68	6.56
All changes at Phrase Level	2.40	4.78	4.46	4.44
All changes at Sentence Level	0.86	1.89	1.61	0.83
All changes at Idea Level	1.21	2.44	1.32	1.06
All changes at Section Level	0.08	0.78	0.25	0.22
All Additions	2.05	4.44	4.61	4.83
All Deletions	2.08	2.89	4.29	2.56
All Substitutions	5.51	6.22	5.39	5.39
All Reorderings	0.51	1.11	1.071	0.33

Certainly the essay still has a long way to go. This is the second draft of a piece that still requires many more drafts. But that first step, establishing the main line of the argument, was a major one -- one that most students in our sample did not seem to recognize as a possible strategy.

What is apparent, then, from these discussions is that, although most of the Grade 8 students were turning in first drafts with superficial changes, some were able to revise significantly and radically. Further, although one or two such students seemed to crop up randomly in most classes, there were several classes in which the majority of the students were using extensive and effective revision strategies. Whatever explanation one can give for the former phenomenon (previous teaching or personal intuition), the latter phenomenon is likely best explained by the pedagogy of the students' current teachers.

A few teachers, then, were able to provide appropriate tools and an appropriate environment for their students to begin to acquire effective revision strategies. These were not exceptional children. Their first drafts are no better than the first drafts of the rest of the population. What distinguishes their writing is their ability to go beyond that first draft, to bend their energies towards rethinking, reshaping, and remoulding their original exploratory pieces. The teaching of revision strategies and a complete writing process does not turn average students into gifted writers, nor does it increase cognitive or affective maturity. What it does do is to allow students to draft the best piece of written work of which they are capable at their particular level of development. Relatively few of the students in our sample knew how to do this.

Sample Essay 24 (Grade 8)

There are probably things happening in the world around you at school among friends at home, in the country, in the world that you think ought to be changed. Select one and write a composition (essay or article) to convince someone else (preferably someone who has the power to make changes) that what you object to is really bad and ought to be changed.

Poor Countries

drill wells

and technology that

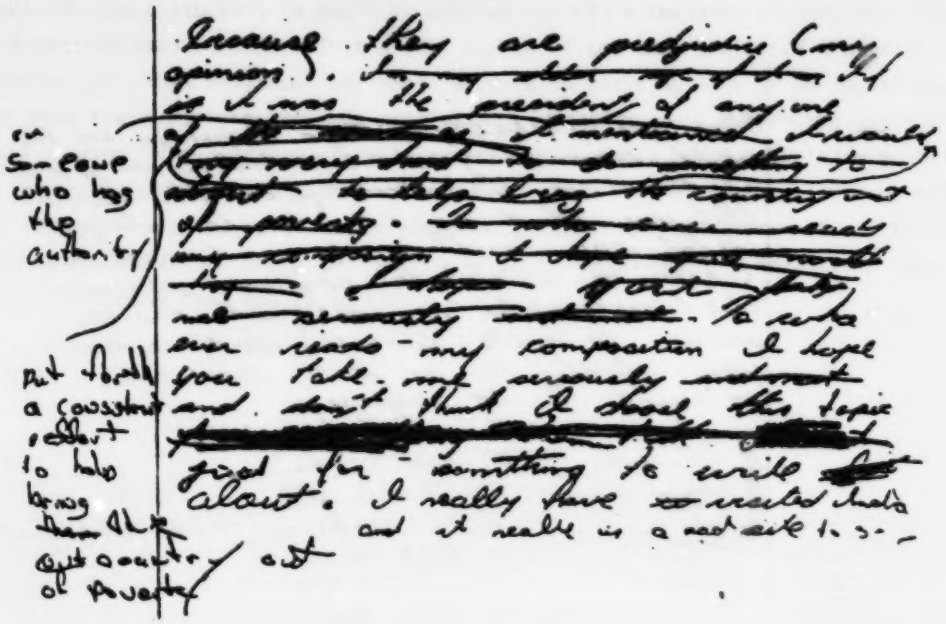
There are many poor countries in the world today and personaly I think it is disgusting. With the money some countries have, we could

I think we should

I visited there for a month, we stayed in Calcutta for a month we visited Calcutta I did

poverty stricken area in India Calcuta. Calcuta is not a very large city and yet it has a population of about nine million people. I think that Canada and the U.S could bring some of the poor people of India a little less than half the population of Canada. I think that Canada, the U.S and Britian could bring some of the people people there. India asks them Country but don't want to

Sample Essay 24 (Cont'd)



Sample Essay 25 (Grade 8)

(a) First Draft

There are people over-seas who are starving or diseased; sure we have UNICEF and all the other special programs, but instead of making people go over there, why don't we spend some money, build something like a hospital for those who really need it. Canada took in some boat people and know they are pretty well educated and have a job. But take for instance Reagan, I'm sure we all know what type of person he is; well if you don't I do. He cuts off College grants for kids who need it, and increases on defence spending. Sure, its nice to know if there were ever to be a World War they could protect themselves. But it seems every time he spends money on defense he goes deeper in the defacet. I think he's a war nut. He never tries thinking of easier solutions like for example he cuts exactly half of the money on defense and half on College funds. I don't think he's ever thought once of helping those poor starving people. Oh no! Not Mr. Bigshot Reagon he has to always think of defense. No wonder the presidents of countries don't like him that much. Evertime he opens his mouth it must be about defense or something like that. In New York half the people mainly students sleep under doorways etc. because of his cut on College funds. There's a lot of space in the U.S. to put people who are under priviliged. If Canada helped those boat people why can't Reagan. Is he ashamed of helping them; is it their nationality, colour what? I'm sure there must be a lot of responsibility to be a president of the U.S. but, doesn't he have any room for these people, can't he set something aside, can't somebody talk to him or do something about it. Can't somebody help them?

Sample Essay 25 (Grade 8)

(b) Final Copy

We all know there are people over seas that are starving, and are diseased. Sure, there are special programs like UNICEF etc, and every time we see a commercial on these poor people we all find in our hearts compassion for them, so we send money. When we send people over there, we teach them to farm, build houses etc. But that only helps the majority, not all of them. Now my question why can't we ship some here, bit by bit, so we can help them out or ship about 20 doctors, nurses, teachers, carpenters, etc. there? The carpenters could build hospitals with the funds they get, so the doctors could start doing their job. Teachers can teach about anywhere as long as they have a blackboard. Now you'll say there are already people there doing that. But, all they've done is help on the outside sort of thing. With carpenters there they could repair houses, show them how to make beds and learn to make chairs and tables. This must cost a whole lot of money, I agree with you. But somewhere, somehow, someone must help them lead a happier normal life. When the boat people came, Canada took some in. We nourished them, clothed them put the children to school, and helped get rid of diseases etc. Now most of them have a job, the kids are happy and some even talk english, even if it is with an accent. So Canada wasn't bad. I think the states took in less than us, and if they did, it was probably Reagan's fault, him and his defense spending! But, if we helped those Vietnamese people, why can't we help them? We aren't in that much of bad shape are we? And even if we are, I think we can somewhere find room to help them lead a better life in this world, can't we?

8 Editing Strategies

For most writers, the very last stage of the writing process (though not necessarily only a final stage) is an editing stage. When all the thinking, rethinking, writing, and rewriting of which one is capable (or for which one has time or patience) have been done, and done again, it remains to prepare a version of the paper fit for its intended audience -- a version that is legible, and from which any errors in spelling, punctuation, and grammar that survived the writing and rewriting are finally removed. As the final stage of our examination of the writing skills of the students in our study, therefore, we undertook an analysis of their success in correcting mechanical errors.

Like the revision analysis, such an analysis poses technical problems, for whenever there are substantive changes between the first and second drafts, any attempt to compare them on purely mechanical grounds is confounded. Our solution was to draw yet another 10 per-cent subsample from the original sample and then to sort these papers into three broad groups: those for which there was onlyone draft, those for which there were two drafts with substantive differences between the first and second draft, and those for which there was no substantive difference between the first and second drafts. The latter were automatically included in the study. Those in the first two groups were replaced by examining the next paper in the original sample. If it had two drafts with no substantive differences between them, it was included. Otherwise, the next paper was examined, until there were a sufficient number of papers in each cell. (The actual N's were twenty-nine Grade 5, twenty-two Grade 8, and thirty-six Grade 12 students.)

Such a selection procedure inevitably builds a bias into the results. To be sure, as with the revision analysis in the preceding chapter, the fact that we excluded papers for which there was only one draft means that our figures overrepresent the amount of editing that was done because some students did none at all. On the other hand, the fact that we excluded papers that showed substantive changes between the first and second drafts introduces a bias in the opposite direction: those students who had at least some notion of what revision is, and who therefore might also have had the most effective editing strategies, were excluded. Technically, therefore, the basis of this part of the report is less reliable than for any other part. For this reason we do not report the standard deviations of the means we will be discussing (in fact, as with the revision study and the error analysis, they are consistently high), and we have undertaken no statistical tests of the validity of the differences that appear.

Because errors in spelling and punctuation far outnumber any other errors, as chapter 6 makes clear, we restricted our analysis to these kinds of errors. Every instance of every such error was marked in both drafts. Then, taking the second draft as the point of reference, we classified the errors according to whether they were errors in the first draft that were corrected in the second, errors in the first that were copied unchanged into the second, or errors that were introduced for the first time in the second draft, the first draft having been correct at the corresponding point.

Tables 8.1 and 8.2 show the raw incidences (i.e., without any control for the differing lengths of the papers) of spelling and punctuation errors respectively. It is immediately apparent that there is very little difference in the raw incidence of error from the first draft to the second draft at any level. On the contrary, in most cells the second drafts have pretty much the same mean number of errors as the first, in the case of spelling errors, the Grade 12 students actually increased the mean number of errors as they made their second drafts.

Tables 8.3 and 8.4 re-examine the same results, controlling this time for the length of the papers by computing the mean frequency of spelling errors per word (table 8.3) and of punctuation errors per t-unit (table 8.4). These tables bring out several points of note. The first is the increasing ineffectiveness over time of the strategies students use to correct spelling errors. The proportional frequency of such errors declines significantly by grade, as chapter 6 would lead us to expect, in both the first and second drafts. However, although there is still obvious room for improvements to the second drafts, by the Grade 12 level attempts to make such improvements have become totally ineffectual. The Grade 5 students shine by comparison.

As to the punctuation errors (table 8.4), although again there is a steady decline in the proportional frequency from Grade 5 to Grade 12, there is no difference at all between the Grade 5 and Grade 12 students when we consider the difference in the proportional frequency of errors in their first and second drafts. Since the Grade 5 students have a much higher frequency of errors to deal with, we are forced again to conclude that their editing strategies are actually more effectual than those of the Grade 12 students.

Table 8.5 shows in another way how strategies for correcting spelling errors differ over the three grades. For all three, the most frequent kind of error in the second draft is one that has been copied unchanged from the first. The frequency with which students correct spelling mistakes diminishes as they get older, so that by Grade 12 students are just as likely to introduce new errors in their second drafts as to correct them.

This is not true of punctuation errors, as can be seen in table 8.6. At all levels, students correct more punctuation errors than they introduce. But they also copy far more than they correct. The Grade 5 students again stand out. Given that the proportional frequency of punctuation errors is so much higher in their papers than in the Grade 8 and Grade 12 papers, it is obvious that they are much more conscientious and careful in their copying than their older fellow students.

Table 8.1
Total Spelling Errors (Means)

	Grade 5	Grade 8	Grade 12
First Draft	5.172	3.182	4.611
Second Draft	4.862	3.065	4.806
Difference	0.31	0.137	-0.195

Table 8.2
Total Punctuation Errors (Means)

	Grade 5	Grade 8	Grade 12
First Draft	5.586	3.318	3.806
Second Draft	5.103	2.909	3.056
Difference	0.483	0.409	0.750

Table 8.3
Mean Proportional Frequency of Spelling Errors per Word

	Grade 5	Grade 8	Grade 12
First Draft	.030	.014	.011
Second Draft	.028	.013	.011
Difference	.002	.001	.000

Table 8.4

Mean Proportional Frequency of Punctuation Errors per t-Unit

	Grade 5	Grade 8	Grade 12
First Draft	.381	.137	.126
Second Draft	.353	.117	.098
Difference	.028	.020	.028

Table 8.5

Editing for Spelling Errors (Means per Word)

	Grade 5	Grade 8	Grade 12
Unchanged, 1 to 2	.024	.010	.009
Corrected in 2	.007	.004	.002
New in 2	.005	.003	.002

Table 8.6

Editing for Punctuation Errors (Means per t-Unit)

	Grade 5	Grade 8	Grade 12
Unchanged, 1 to 2	.270	.098	.078
Corrected in 2	.110	.039	.048
New in 2	.083	.019	.020

These results raise a number of questions that cannot be answered from this research; they require the observation of students in the process of rewriting to see what they actually do, supplemented by questioning to find out what they think they are doing. It may be, for instance, that the design of the study prevented the students from doing themselves justice. For one thing, the design made no provision for one of the most effective of all editing strategies -- having someone else read one's paper to identify errors that escape the author's eye, blinded as it so often is by intended meaning. (Such a strategy was not explicitly forbidden in the instructions we gave to the participating teachers, but we suspect that the aura of a test that must have hung around the study as a whole, despite our efforts, would have deterred all but the most determined students from asking a fellow student to read over their first or second draft.)

In addition, the time constraint may have prevented some of the more able students from doing themselves justice. This is particularly likely to be the case with Grade 12 students. As we have noted many times, their papers were longer, richer, more complex, and in almost every significant respect more mature. Their very length, like their complexity, makes it less likely that their authors will identify and correct all mechanical errors as they try to prepare a legible version within the space of one class period.

Still, it is important not to overstress hypothetical explanations for the weak editing skills these analyses suggest -- particularly since the most obvious conclusion to which they point is entirely consonant with the implications of our analyses of revision strategies and of mechanical control in the second drafts generally. In truth, what the papers as a whole suggest most strongly is that as early as Grade 5 students have been strongly conditioned to think that a second draft differs from a first draft in being neater. The important thing in a second draft is to use your best handwriting and to avoid all unsightly blotches and erasures. If, in the process of improving your paper in this way, you also succeed in correcting mechanical errors, that is all to the good, but manifestly it is the visual improvement that counts most in the minds of these students. As students get older, the difference between the neat handwriting they use for their second draft and the more relaxed and hurried hand they use for their first draft diminishes (in the case of some Grade 12 students it disappears, their handwriting by that stage having degenerated into a mature style or decrepit scrawl for all occasions). Unfortunately this diminution in the visual differences between the first and second draft is not counteracted by an increasing level of editorial skill. Instead the effectiveness of editing strategies diminishes in much the same way. Grade 5 students do at least reveal that they are aware that they have a responsibility for mechanical control in their second drafts, no matter how ineffectual the strategies they use are in reality. Grade 12 students seem to have a much more cavalier attitude: the writing of a second draft, their work seems to suggest, is just another of the pointless things one is asked to do when one has to write. Gestures seem to be a sufficient response.

If, however, students are to do justice to those abilities we have discussed in chapters 2, 3, and 4, then in addition to their need to acquire effective revision strategies they need to be taught effective editing strategies. Our analysis of the differences between the first and second drafts of this particular group of students suggests that they know virtually none.

PEDAGOGIC IMPLICATIONS

The single most important pedagogical implication of this part of our analysis is that teachers should try to counteract the very strong belief, which most students seem to have internalized fully as early as Grade 5, that preparing a final draft of a paper merely means making it more presentable visually. Teachers should also make sure that students understand the difference between revising, as it is conceived in the previous chapter, and editing. They are quite different processes, and they have very different roles to play in the writing process. The former is in every respect the more important, and if it is carried out as it should be, the need for the superficial kind of editing discussed in this chapter should probably be reduced.

Nonetheless, student should be told about as many editing techniques as possible. One of the most effective is to have a fellow student revise one's paper, and this strategy is more effective if students can be paired or grouped in such a way that they have different preferred errors. It is also always effective to ensure that some time elapses between what one thinks is the final editing of one's paper and the later editing that is <u>really</u> the final editing, for one of the greatest problems in editing is that writers know what they meant to say and therefore see it even when it is not actually there.

Finally, for particular students who repeatedly make the same mechanical errors, we would recommend the development of batteries of worksheets by which they could drill themselves on the correction of particular errors. Such worksheets are best used in conjunction with a writing folder. If a teacher sees that particular students repeatedly create comma splices, for example, and have difficulty seeing them at the editing stage, the teacher can assign those students a worksheet on comma splices, tell them to make a note in their writing folders that subsequently they must assume responsibility for avoiding comma splices, and then leave the responsibility to them. Such a technique works better than most others for those students who have difficulty with particular editing tasks, and it has the further advantage that it does not waste the time of those students who do not have that particular problem.

9 Teaching Implications

Throughout the report references have been made to the pedagogical implications of our findings. Sometimes the same implications, with minor variations, could be drawn from different analyses. In this chapter we would like to bring together and elaborate the most significant of these.

To begin with, however, it should be stressed once again that in important ways the population of students we have been dealing with looks like an extremely literate population. As the analysis in chapter 5 shows, as early as Grade 5 they are able to draw very effectively on the syntactic strategies needed to respond to the demands of the topics they were assigned. This is not a population about whom anybody could justifiably claim that they do not even know how to put a sentence together. It is true that, on occasion, when the intellectual or emotional demands of particular topics are excessively high, some may have difficulty in putting together sentences that easily give up their meaning. But this is true of almost all human beings, and the fact that the same phenomenon can be discerned in the writing of Grade 5, 8, and 12 students should not call for any comment at all -- especially since in fact it is so rare.

Similarly, although it is true that a few students in the sampled population limited themselves to short, simple sentences, most of them used their acquired linguistic abilities to generate a range of sentences, depending on the topic itself, the mode, and their engagement with it. Looked at in their own terms, the grammatical abilities of these students are on the whole fully adequate to this kind of writing task. Looked at in the light of other studies that have undertaken comparable analyses, their achievement is impressive indeed.

The aspects of mechanical and conventional correctness analysed in chapter 6 show the same patterns. With the exception of a small number of students who repeatedly committed the same or related errors, most errors were completely random in nature. Even the most common errors occurred at worst only twice per paper, and the great majority of them occurred far more rarely than this. Indeed, so rare are most errors that it proved necessary to group them into categories in order to discern whether or not there are any developmental or modal differences.

When the errors were grouped in this way, two trends became apparent. The first is that, at all levels except for Grade 12A, mechanical and conventional errors are more likely to occur in writing tasks that students find difficult. This is a manifestation of the same

phenomenon as that noted above in the discussion of syntactic abilities. It does not prove that the students do not know the rules; it merely proves that, when other demands are high, they do not invoke them. The most appropriate pedagogical response, accordingly, is not to teach the rules (especially since it is clear that on the whole the students already know them), but to review the nature of the demands imposed by particular writing tasks and then decide whether to (a) adjust the level of difficulty of the writing task downwards (so that students have a fairer chance of demonstrating their knowledge of mechanics and conventions) or (b) judge their performance not on the apparent weakness in mechanics and conventions but on the achievement in the writing task that caused the apparent breakdown.

The second trend that is apparent is that, as early as Grade 5, most students are controlling mechanics at close to the level of normal adult competence (which, like theirs, is not absolutely perfect all the time). Consequently, for most students there is little improvement over the following seven years. Admittedly, papers get longer, and the demands of the tasks increase, but on the average the same number of instances of a particular error is as likely to occur in a Grade 12 paper as in a Grade 5 paper.

Moreover, where the frequency of mechanical and conventional errors is significantly higher than this, there is good reason to believe that it is the result in part of factors that are beyond the power of the classroom teacher to address, above all to socio-economic factors (some socio-economically based types of errors are most frequent in Grade 12G papers, showing that all the teaching addressed to them since Grade 5 has not succeeded in effecting much change in the performance of some students), and to the fact that, no matter how well and how often some students are taught rules for spelling and punctuation, they will always remain pathologically poor at both activities. In saying that by Grade 5 most students are controlling mechanics and conventions about as well as they ever will, we may refer to both ends of the scale. Some will be performing just as poorly in Grade 12 (Grade 12G in all likelihood) as they were in Grade 5. We all know, of course, that some of these pathologically bad spellers will leave Grade 12G to become extremely successful business people.

However, such students are clearly exceptions. All in all, the level of mechanical control demonstrable in the papers we examined again points to a population that is extremely literate. It might be justifiable to say that some students are careless about editing for mechanical correctness, or are indifferent to the demand for it; it is certainly justifiable to say that too many do not have efficient techniques for editing out the very small number of errors they commit. But it would be nonsense to say that these papers were produced by a population of students who do not know how to spell, who are ignorant of the basic rules of punctuation, or have not been taught the basics of English grammar.

Such a level of literacy is apparent as well in the story writing of these students, especially as it is demonstrated in invented narratives. Once again, the elements of this skill are in place by Grade 5, and by the Grade 12 level the achievement can be impressive indeed. Such an achievement suggests that, for most students, their homes and schools have

provided them with sufficient examples of stories for them to be able to replicate the structure of a typical story in a way that conforms to adult expectations, even though there can surely have been no direct teaching of story structure in the experience of Grade 5 students (nor, one hopes, in the experience of Grade 12 students). This fact is related in an important way to the achievement in syntax and in mechanics already discussed. In all three areas, there is good reason to believe that the acquisition of the skills demonstrable in these papers is the result above all not of teaching but simply of exposure. Just as the sense of story structure is picked up, apparently by a kind of osmosis, as students are exposed to stories, so in large measure their ability to generate appropriate sentences is picked up as they listen to and read language that models the kind of language they will need to produce. And, similarly, in large measure their sense of what surface features of written discourse are acceptable in their own writing comes not so much from explicit teaching about mechanics and conventions (although some can certainly be justified) as from the same kind of immersion in language that illustrates the features one wants the students to produce.

If, however, we feel justified in saying that in these areas performance is on the whole more than satisfactory -- and our analyses justify, if anything, less teaching rather than more -- in other areas this is not so obviously the case.

ARGUMENTATIVE DISCOURSE

Although in many respects the students sampled showed themselves to be very literate, there were too many, even at the highest educational level, who lacked the ability to write argumentative discourse. Lack of success in one particular genre may not seem important; however, argumentative discourse holds a very special place, not just in the educational system, but in the development and communication of knowledge in Western society. The careful, reasoned substantiation of a thesis in orderly prose is what scientists must be skilled at as well as lawyers, government officials, and business administrators -- in fact, anyone who wishes to effect any change of the most minor kind in contemporary society. Furthermore, argumentative discourse must be preceded by reasoned thinking, the kind of thinking that is central to the academic enterprise. For these reasons it is appropriate -- indeed, essential -- that teachers devote class time and personal energy to developing their students' abilities in this mode.

Although we can only surmise the possible reasons for the students' relatively poor performance in this genre, we would like to suggest the following strategies, along with some long-term monitoring to assess results. (We emphasize "long-term" because, in language development, effects are often only manifest after considerable delay. Exposure to reading, for example, requires a fair immersion and perhaps a fallow period before students intuit and internalize appropriate procedures.)

-We recommend more exposure to good argumentative models at all levels, from good adult prose (in editorials and scientific pieces) to student writing. Students should be encouraged to respond to the ideas presented in such prose in much the same way as they respond initially to stories -- that is, without particular attention to structure. In the upper elementary and high school years, some analysis of the structure of the models, especially in the context of their own writing, will be profitable, as long as this supplements rather than replaces the reading.

-The competing model of persuasive discourse (commercials, billboards, political speeches) will have to be combatted. Again, especially in the upper elementary and high school years, some discussion of the strategies employed in such discourse, contrasting its techniques and approach with those of argumentation, may help to combat the tendency so prevalent in these students' writing to write persuasion rather than argument.

-Children should be given the opportunity to write arguments from even the Junior years: Grade 5 is not too early. The range of topics should be determined by the students, rather than imposed by teachers. Many Grade 5 students write with considerable liveliness and passion on political and moral issues.

It is important to make a distinction at this point. Children are frequently expected to write expository pieces especially in social and environmental studies, often even in the Primary years. Generally, however, these pieces are not arguments. They are research projects in which students are invited to write everything they know or can find out about a specific project; rather than being unified pieces arguing a central thesis, such writing is necessarily diffuse, often unplanned, with no logical organization or structure. Far from developing argumentative writing skills, such writing may inhibit their development. Of course there is no reason why students could not be encouraged to write argumentative pieces on, say, the Inuit. This is not, however, the normal expectation.

-Writing argumentative discourse is a considerably easier task, both technically and cognitively, when the writer upholds and substantiates only one side of the potential debate, instead of attempting to argue both sides and then reach an accommodation. We recommend that, until students have mastered the one task, they not be assigned the second. Of course, if students decide themselves to tackle the more difficult task because they see the complexities involved in an issue, teachers should not prevent them from so doing. The teachers should, however, recognize the greater difficulty of the task undertaken and not fault their students for any resulting failures.

-What will help students most to improve their argumentative writing relates to the issue to be discussed in the following section: they need to acquire a wider sense of the composing process, so that they may develop and explore their ideas in a first draft (or drafts) and then learn how to reorganize such ideas in an appropriate argumentative structure in the later drafts.

REVISION

The most striking limitation in the writing of the students in our sample was their narrow conception of the writing process. Most had not learned strategies for taking their pieces through successive drafts in order to explore, discover, and then refine and communicate. Too frequently, their first drafts were their last, with only minor cosmetic changes.

Students from the earliest years (Grade 1 and 2) must be encouraged to write and to develop a fuller composing process. There are excellent texts now available to teachers that describe in detail how to create an environment and provide a structure in the classroom to make such learning and writing possible. For most teachers, such teaching will necessitate radical rethinking of their strategies and approaches; for this reason, extensive in-service workshops are essential, accompanied by the reading of such texts as Graves' Writing: Teachers and Children at Work. (The emphasis must be on "extensive". To adopt such a new pedagogy, teachers must understand the theoretical underpinnings of such an approach as well as its practical manifestations; they need time to digest and opportunity to explore and collaborate.)

STORY WRITING

In contrast to their continued difficulty with argumentative discourse, the students in our sample showed considerably greater success with story writing. Specifically, in the acquisition of the schema for story structure, there was marked upward development along the years, with nearly all students having acquired the ability to embody story structure for invented stories in Grade 8 and for personal stories in Grade 12. There are two specific recommendations that we would make to teachers in this regard:

-Students should be encouraged to write both personal and invented narratives throughout their school careers. Invented stories should be elicited, to some extent, initially because students seem to learn to incorporate story structure earlier in this genre. In addition, it is in the invented stories that students were able to show the most affective development in their portrayal of others.

In contrast, the affective scale showed that students developed most fully in their presentation and exploration of self in the personal stories. Each mode, in other words, allows for its own kind of development, both of which are desirable for the maturing writer.

-We were struck by much of the narrative writing at the Grade 12 level -- by the quality of the stories as well as by their exploration of ranges of experience and feeling not possible in other genres. We recommend that teachers continue to elicit narrative writing throughout the Intermediate and Senior years as a normal part of the English curriculum, in addition to the other ranges of writing typically assigned.

BALANCING DEMANDS

One theme that has recurred throughout the report has been the following: As students stretch along one dimension of their writing (whether it be affective, cognitive, or technical), there is often a simultaneous backsliding or breakdown along other dimensions. When students attempt a more difficult conceptual task, often their rhetorical skills break down. In attempting to embody a more complex vision of life, Grade 12A students showed breakdowns in their ability to realize story structure. Students who attempt to synthesize both sides of an argument will have trouble organizing the whole.

Teachers must recognize the relationship between the complexity of the task undertaken and the level of command of mechanics, syntax, and rhetoric, so that they may reward the stretch upwards rather than penalize the consequent breakdown. One of the most dangerous and ill-informed fallacies underlying popular commentary on the writing abilities of today's students is that the ability to write good prose is a relatively simple skill which should be established early in the educational process and maintained at a level of perfection for ever afterwards. This is simply not true. On the contrary, the ability to write satisfactory prose involves an extraordinarily complex set of skills, which continue to grow, though unevenly, throughout the educational process. Teachers have a responsibility to foster growth in all the relevant domains. They cannot do this effectively if they respond too readily to an ill-informed public demand to restore some "basic" skills, when the real cause of the perceived or alleged weakness in basic skills is not that they have not been taught but rather that students are demonstrating growth in another area.

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Appendix I: Demographic Instrument

1. Case I.D. _____: ___ ___ ___
2. Board _____: ___
3. School _____: ___ ___
4. Mode _____: ___ ___ ___ ___
5. Date of Birth (Year, month) _____: ___
6. Sex _____: ___
7. Grade _____: ___
8. First French Immersion Start (grade) _____: ___ ___
9. First French Immersion End (Grade) _____: ___ ___
10. Second French Immersion Start (Grade) _____: ___ ___
11. Second French Immersion End (Grade) _____: ___ ___
12. Number of Versions _____: ___

Appendix II: Syntactic Scores for Syntactic Complexity Analysis

Case ID: _____

Words:	— — — —
Sentences:	— — —
T-Units:	— — —
Finite Clauses:	— — —

Appendix III: Instrument for Error Analysis

Selected mechanical and conventional errors.

ID_____

A. Punctuation

1. Run-on sentences _____: ___ ___
2. Comma splices _____: ___ ___
3. Fragments _____: ___
4. Omitted ? _____: ___
5. Omitted ' possession _____: ___
6. Omitted ' contraction _____: ___
7. Confusion of its and it's, etc. _____: ___ ___
8. Omitted quotation marks _____: ___
9. Faculty capatilization: Cap for l.c. _____: ___
10. Faculty capitalization: l.c. for cap _____: ___
11. Other _____: ___
    Note on verso

B. Spelling Errors

12. Confusion of homophones (too/two) _____: ___ ___
13. Phonetic errors (through → thru)_____: ___ ___
14. Colloquial phonetic (cuz) _____: ___
15. Word division with a (alot) _____: ___ ___
16. Other word division _____: ___
17. All other spelling errors _____: ___

C. Pronoun Errors

18. hit you and I, between you and I _____: ___ ___
19. it was him _____: ___ ___
20. Stan and me went _____: ___
21. Indefinite singular they/them/their _____: ___
22. you → he they, etc. _____: ___
23. distancing _____: ___
24. Unclear and vague reference (he, they, which) _____: ___
25. Other _____: ___

ID _____/2

D. Adverbs

26. Disputed (drive slow) _____: __

27. Substandard (plays real good) _____: __ __

28. Misplaced ONLY _____: __

E. Modification

29. Dangling modifier _____: __

30. Misplaced modifier _____: __

F. Agreement

31. Nonstandard (horses runs) _____: __

32. Attraction (horse at races run) _____: __

33. Other _____: __

G. Verb Forms

34. Substandard (I seen) _____: __

35. Disputed (gotten, lay) _____: __ __

H. Other Shibboleths

36. Sentence final prepositions _____: __ __

37. Split infinitives _____: __

38. who for whom _____: __

39. (specify) _____: __

40. (specify) _____: __

I. Total Syntacting Breakdown

41. Instances _____: __